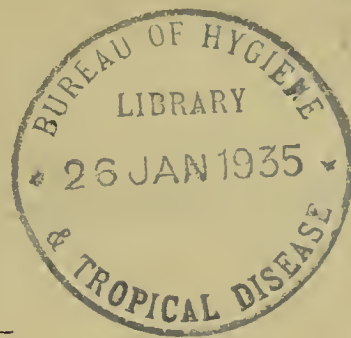


1934.

QUEENSLAND.



ANNUAL REPORT

OF

THE COMMISSIONER OF PUBLIC HEALTH

TO

30TH JUNE, 1934.

PRESENTED TO PARLIAMENT BY COMMAND.

BRISBANE :

BY AUTHORITY : DAVID WHYTE, GOVERNMENT PRINTER.

A. 27—1934.

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ANNUAL REPORT OF THE COMMISSIONER OF
PUBLIC HEALTH,
1933-1934.

TO THE ASSISTANT UNDER SECRETARY, HOME SECRETARY'S DEPARTMENT.

SIR,—I have the honour to submit for the Minister's information the following particulars regarding the work carried out by this Department during the twelve months ended the 30th June, 1934, as well as my comments regarding Public Health administration for the State of Queensland.

The following vital statistical information is furnished to show the fluctuations in the rates of this State for the preceding year as compared with the one under review, and the analyses of the various rates in other countries of white races :—

CRUDE BIRTH RATE.

Country.	Year.	Birth Rate.	Year.	Birth Rate.
Commonwealth	1932	16·94	1933	16·78
Queensland	1932	17·89	1933	18·13
New South Wales	1932	17·75	1933	17·00
Victoria	1932	15·21	1933	15·59
South Australia	1932	14·54	1933	15·32
Western Australia	1932	18·85	1933	17·95
Tasmania	1932	20·25	1933	19·93
New Zealand	1932	17·09	1933	16·59
England and Wales	1932	15·3	1933	Not available
Scotland	1932	18·6	1933	Not available
Irish Free State	1932	18·9	1933	Not available
Canada	1932	22·4	1933	Not available

DEATH RATE.

Country.	Year.	Death Rate.	Year.	Death Rate.
Commonwealth	1932	8·63	1933	8·92
Queensland	1932	8·05	1933	8·83
New South Wales	1932	8·44	1933	8·58
Victoria	1932	9·30	1933	9·59
South Australia	1932	8·46	1933	8·44
Western Australia	1932	8·80	1933	8·64
Tasmania	1932	9·12	1933	9·60
New Zealand	1932	8·39	1933	7·98
England and Wales	1932	12·0	1933	Not available
Scotland	1932	13·5	1933	Not available
Irish Free State	1932	14·4	1933	Not available
Canada	1932	10·1	1933	Not available

RATES OF INFANTILE MORTALITY IN VARIOUS COUNTRIES.

Country.	Year.	Death Rate per 1,000 Births.	Year.	Death Rate per 1,000 Births.
Commonwealth	1932	41·30	1933	39·49
Queensland	1932	41·03	1933	42·62
New South Wales	1932	40·25	1933	39·33
Victoria	1932	43·00	1933	40·43
South Australia	1932	36·73	1933	32·13
Western Australia	1932	44·57	1933	36·83
Tasmania	1932	40·53	1933	41·07
New Zealand	1932	33·7	1933	Not available
England and Wales	1932	65·0	1933	Not available
Scotland	1932	86·0	1933	Not available
Irish Free State	1932	71·0	1933	Not available
Canada	1932	73·0	1933	Not available

COMMUNICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES)—1ST JULY, 1933, TO 30TH JUNE, 1934.
(METROPOLITAN AREA.)

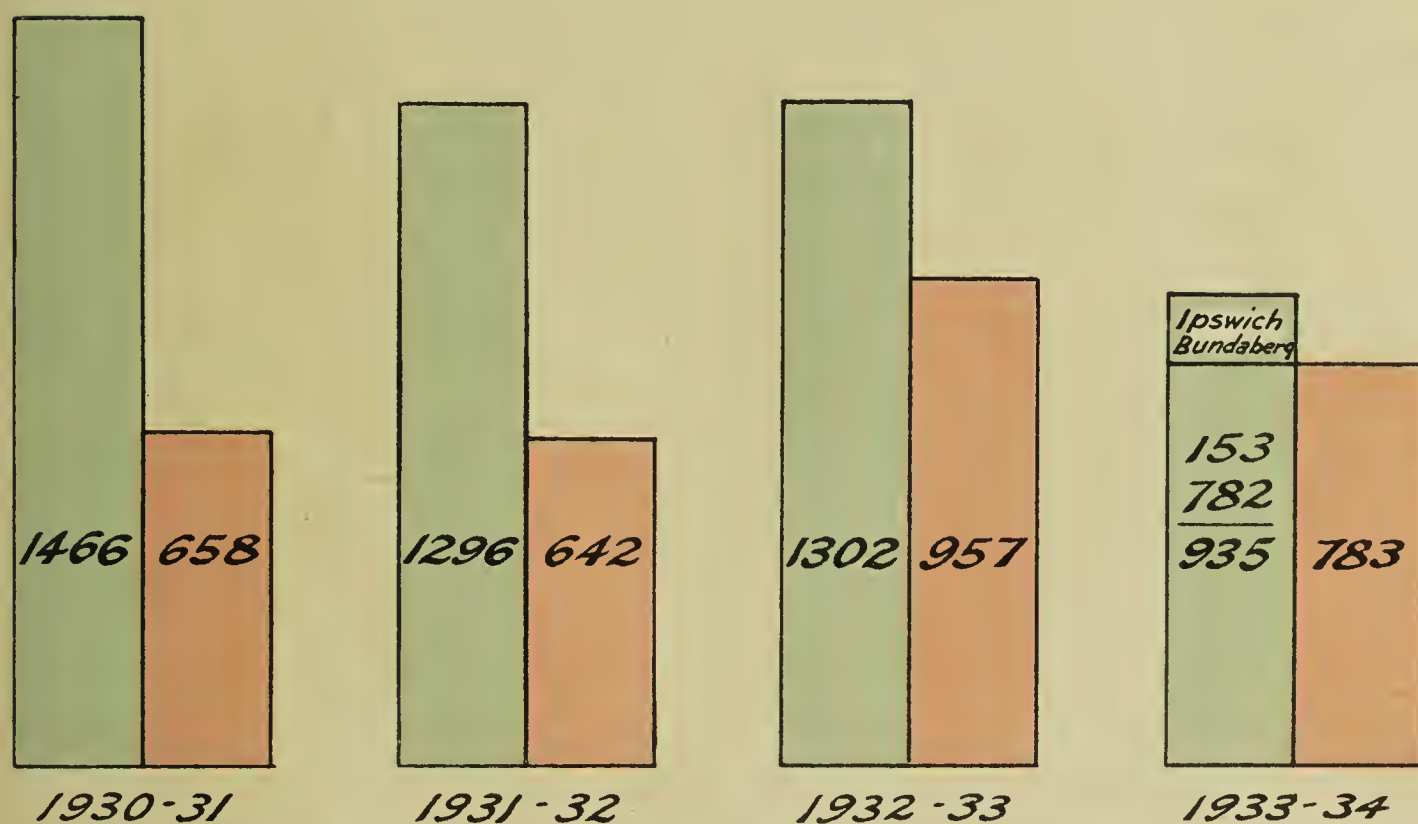
Diseases.	MONTHS.												Totals.	
	1933.						1934.							
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	1933-34.	1932-33.
Anchylostomiasis .. ..	..	..	..	..	..	2	..	..	1	..	..	..	1	158
Acute Anterior Poliomyelitis ..	..	..	..	..	1	2	..	..	..	1	1	..	5	5
Anthrax .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill's Disease .. ..	..	..	..	..	..	..	..	..	1	..	..	..	1	..
Cerebro-Spinal Meningitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(epidemic)														
Cholera, Asiatic	66	49	58	57	69	69	51	62	70	82	82	63	778	957
Diphtheria .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery, Amœbic .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery, Bacillary .. ..	..	..	..	1	..	..	..	..	..	..	..	..	1	2
Encephalitis Lethargica ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Filariasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Leprosy .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Malaria .. ..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
Plague (Bubonic or Oriental) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	2	..	..	..	..	..	..	1	..	2	..	1	6	8
Puerperal Pyrexia .. ..	..	..	..	1	..	..	..	..	..	..	..	..	1	1
Relapsing Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	14	17	13	9	13	10	11	12	12	15	21	28	175	168
Smallpox .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhoid Fever (includes Paratyphoid)	..	4	1	3	6	5	9	5	3	3	..	3	42	19
Typhus Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms) ..	7	10	13	6	6	15	8	8	7	12	15	5	112	96
Yellow Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	89	80	86	77	95	101	79	88	93	116	119	100	1,123	1,416
1932-33 Totals	101	128	78	110	125	141	123	146	170	107	99	88	..	1,416

(OUTSIDE AREAS).

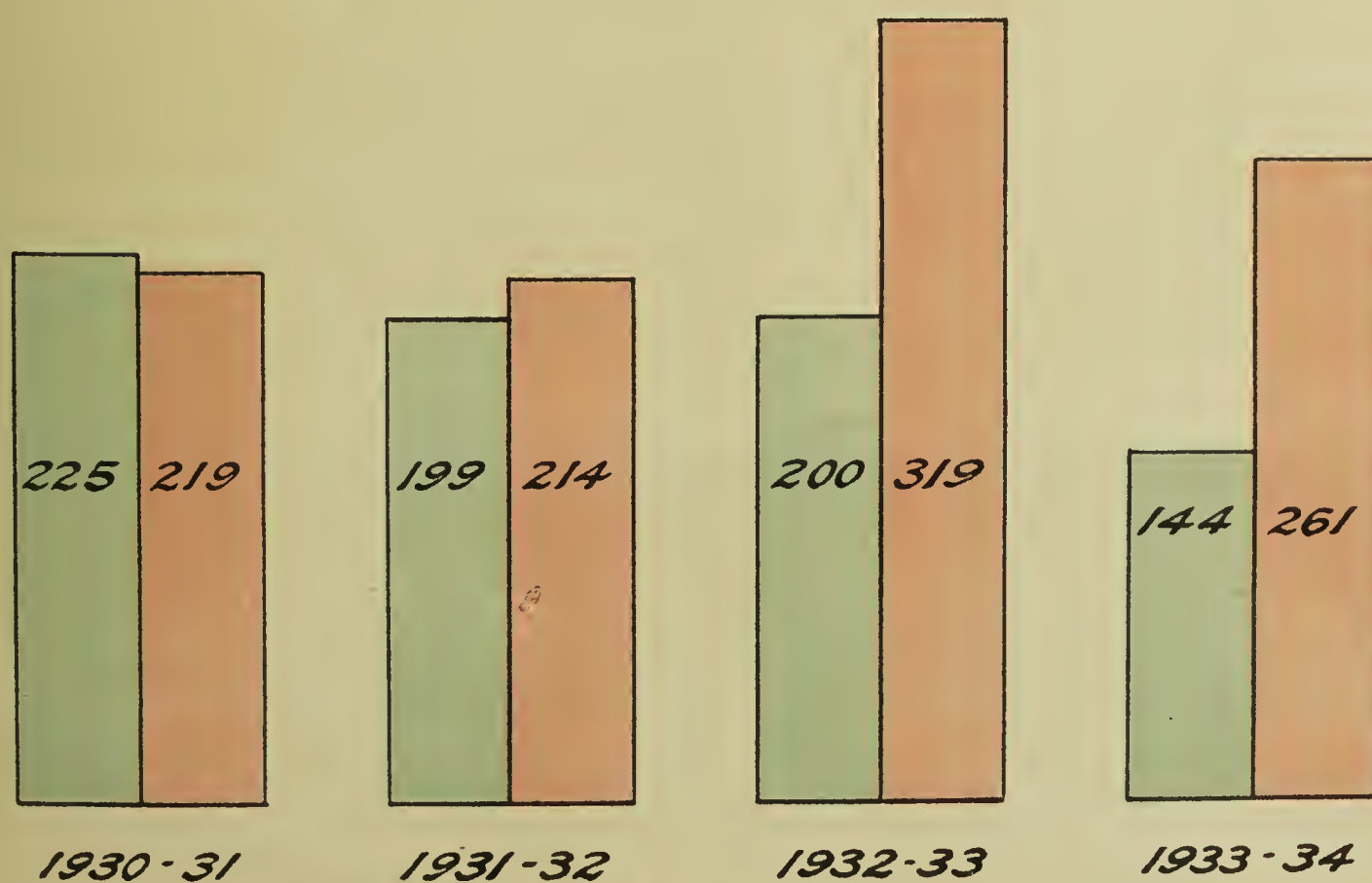
Diseases.	MONTHS.												Totals.	
	1933.						1934.							
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	1933-34.	1932-33.
Anchylostomiasis ..	..	..	..	..	..	2	..	1	..	..	..	..	3	35
Acute Anterior Poliomyelitis ..	1	2	..	..	..	..	1	..	2	..	..	..	6	15
Anthrax ..	..	..	..	..	..	..	..	1	..	..	..	..	1	..
Bilharziasis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill's Disease ..	..	..	..	..	..	..	..	1	..	..	..	..	1	1
Cerebro-Spinal Meningitis ..	..	1	..	2	..	1	..	..	..	..	1	..	5	4
(epidemic)														
Cholera, Asiatic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria ..	81	78	78	66	76	71	84	77	85	79	77	83	935	1,302
Dysentery, Amœbic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Dysentery, Bacillary ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Encephalitis Lethargica ..	..	..	3	..	..	..	2	..	..	..	..	..	5	1
Filariasis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	7
Leprosy ..	1	1	..	..	2	2	1	..	1	..	3	..	11	7
Malaria ..	..	..	..	..	1	1	..	..	1	..	..	987	990	6
Plague (Bubonic or Oriental) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever ..	2	..	3	3	..	1	..	1	..	3	1	..	14	16
Puerperal Pyrexia ..	2	..	1	..	..	..	1	..	..	..	1	..	5	7
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever ..	33	23	33	24	20	20	32	27	33	37	43	43	368	437
Smallpox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhoid Fever (includes Paratyphoid)	3	2	3	3	5	8	2	9	2	4	9	6	56	83
Typhus Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms) ..	5	4	9	11	16	4	4	9	17	10	4	6	99	118
Yellow Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	128	111	130	109	120	110	127	126	141	133	139	1,125	2,499	2,042
1932-33 Totals ..	218	188	145	153	145	190	163	129	196	194	181	140	..	2,042

NUMBER OF CASES OF DIPHTHERIA - 1933-34

Country
 Brisbane



Diphtheria Rates per 100,000 population. —



ANNUAL STATEMENT OF NOTIFIABLE DISEASES DURING CALENDAR YEAR 1933 (METROPOLITAN AREA).

Diseases.	MONTHS.												
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Anchylostomiasis	39	..	117	..	2	..	..	..	..	..	..	..	158
Acute Anterior Poliomyelitis .. ..	..	..	..	..	..	..	..	..	..	..	1	2	3
Anthrax .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill's Disease .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebro-Spinal Meningitis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera, Asiatic .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	65	75	80	89	78	64	66	49	58	57	69	69	819
Dysentery, Amœbic .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery, Bacillary .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica .. ..	..	..	..	..	..	..	..	..	..	1	..	..	1
Filariasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Leprosy .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Malaria .. ..	..	..	..	..	..	..	..	..	1	..	..	..	1
Plague (Bubonic or Oriental) .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	1	1	..	1	..	..	2	..	..	1	..	..	6
Puerperal Pyrexia .. ..	..	..	1	..	..	..	..	..	..	..	..	..	1
Relapsing Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	9	9	10	12	15	16	14	17	13	9	13	10	147
Smallpox .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms)	6	11	10	8	4	9	7	10	13	6	6	15	105
Typhoid Fever (includes Paratyphoid) ..	1	4	1	1	..	1	..	4	1	3	6	5	27
Typhus Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Yellow Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	121	100	219	111	99	90	89	80	86	77	95	101	1,268
1932 Totals	157	108	52	61	78	95	101	128	78	110	125	141	1,234

ANNUAL STATEMENT OF NOTIFIABLE DISEASES DURING CALENDAR YEAR 1933 (OUTSIDE AREAS).

Diseases.	MONTHS.												
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Anchylostomiasis .. ..	..	..	5	1	..	..	..	2	..	..	..	2	8
Acute Anterior Poliomyelitis	1	..	3	..	1	..	1	2	..	..	..	..	8
Anthrax .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill's Disease .. ..	..	..	1	..	..	..	..	..	..	..	..	..	1
Cerebro-Spinal Meningitis .. ..	..	..	..	..	..	..	..	1	..	2	..	1	4
Cholera, Asiatic .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	104	71	106	123	134	99	81	78	78	66	76	71	1,087
Dysentery, Amœbic .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery, Bacillary .. ..	..	..	1	..	..	..	..	..	..	..	..	..	1
Encephalitis Lethargica .. ..	..	..	..	..	..	..	..	..	3	..	..	..	3
Filariasis .. ..	..	..	..	2	..	..	..	..	..	..	..	..	2
Leprosy .. ..	..	1	1	..	2	..	1	1	..	..	2	2	10
Malaria .. ..	..	..	..	2	..	..	..	..	..	..	1	1	4
Plague (Bubonic or Oriental) .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	3	..	2	2	1	1	2	..	3	3	..	1	18
Puerperal Pyrexia .. ..	..	..	..	2	1	1	2	..	1	..	..	..	7
Relapsing Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	35	34	41	40	31	27	33	23	33	24	20	20	361
Smallpox .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis (all forms)	8	6	22	9	3	4	5	4	9	11	16	4	101
Typhoid Fever (includes Paratyphoid) ..	4	14	13	12	4	3	3	2	3	3	5	8	74
Typhus Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Yellow Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	155	126	195	193	177	135	128	111	130	109	120	110	1,689
1932 Totals	125	196	171	176	173	215	218	188	145	153	145	190	2,095

DIPHTHERIA.

In the section of Communicable Diseases, diphtheria claims our attention immediately. The marked fall in its incidence for 1933-34 is striking, and advances encouraging proof of the efficiency of immunisation. Up to the end of June 73,000 children have been immunised, and the measure is being steadily introduced into those districts which have so far held out against it. The number of cases—935—(mostly from unimmunised areas) has never been so low since 1925-26, when the number recorded was 709 in a population 50,000 less than what it is to-day. The marked reduction in cases is all the more significant when compared with the position in the metropolitan area, pictorially demonstrated by the accompanying graphs. It will be seen from these that the two to one ratio of cases, based on the fact that there is twice the population in the country as there is in the metropolitan area, has been definitely eliminated; and if Ipswich and Bundaberg, for example, had utilised the protection conferred by immunisation, I can with safety conclude the two tables would have been in very close approximation, as these two cities were responsible for one sixth of the country incidence. It is also important to note that in the main country localities where immunisation is not yet popular the natural upward trend of the disease is still demonstrated.

It is pleasing, however, now to report that up to the end of June 1,300 children have been immunised in Bundaberg, with the numbers still flowing in. Thus the one big excuse originating from that city can no longer be used by those accustomed to a policy of "laissez faire." The position in Ipswich, on the other hand, is disappointing, as it was one of the first cities to encourage immunisation in 1925-26, but subsequently permitted it to fall into disuse. The City Council, however, is now anxious to see the measure in force and is promoting it to a great extent. *Nevertheless, the lesson taught by*

Ipswich should be understood by all Local Authorities and never forgotten. It points to the fact that once an immunisation campaign is set in motion it should never be allowed to languish; otherwise the original expenditure will have been wasted and the enthusiastic work in vain. Once the main body of children of ages ranging from one to fourteen years has been immunised, there only remains a small annual outlay to be incurred as each fresh batch of oncoming babies attains the age of one year. By so doing a high degree of immunity will be maintained continuously in each community at little cost and the excellent results obtained in the first and biggest effort will not be dissipated.

The position in Brisbane is not so satisfactory, although the representatives of the Local Authority have always expressed themselves favourably in support of the campaign. A step in the right direction, however, has been taken by the City Medical Officer, in conjunction with the Department of Public Instruction, proceeding systematically with the immunisation of children at the various schools.

The slow progress in Brisbane has been of much importance, however, in demonstrating in no uncertain fashion the influence which immunisation is exerting over diphtheria in the country districts. I have already mentioned in the foregoing that the two to one ratio has been definitely eliminated, but when we estimate the rates per 100,000 of the population we find the position reversed, in that diphtheria has been occurring in Brisbane at double the rate in force in the country areas.

ANCHYLOSTOMIASIS.

The campaign against hookworm disease is being actively carried on in those areas where it is endemic. The large numbers of cases discovered and treated by the hookworm officials are not notified in the ordinary manner and are therefore not shown in the list above. Approximately 10 per cent. of the children examined are found to be suffering from the disease. Fuller details are contained in Appendix A. Good work with excellent results is being performed, but the nurses are considerably hampered by the absence of efficient travelling facilities, so that much of the follow-up work and visiting of patients' homes cannot be undertaken. The home treatment therefore must be left in the hands of the parents, who are expected to administer the necessary medicines brought home by the children from school.

The hookworm inspectors are gradually reorganising the system of sanitation in the rural districts, endeavouring to bring sanitary conveniences up to the standard laid down in the Sanitary Conveniences and Nightsoil Disposal Regulations. Greater efficiency would result if all Local Authorities aided the work to the fullest extent in their power.

A regrettable feature, which occasionally crops up, is the stubborn individual who refuses to send in specimens or take the medicine supplied.

ACUTE ANTERIOR POLIOMYELITIS.

With the exception of a few cases, this disease has been conspicuous by its absence. Fresh supplies of serum are always on hand and ready to be forwarded to any area hospital when required.

ANTHRAX.

One case of this disease was discovered in a butcher living in Warwick. He had used a new shaving brush and the following day he thought something had stung him. The spot being itchy he scratched it, a pimple appeared followed by a fair-sized swelling in which *B. anthracis* was discovered. The shaving brush and samples of other shaving brushes from similar sources were examined with negative results. Careful inquiries were also made regarding the movement of cattle from New South Wales. The patient made an uneventful recovery.

ENCEPHALITIS LETHARGICA.

Six cases displaying symptoms akin to those of *Encephalitis lethargica* were reported. It is of value to note that in three cases there was a previous history of Measles.

FILARIASIS.

Although no cases of this disease were notified for 1933-34, there is no doubt that infection is prevalent. With the gradual extension of the sewerage there is a tendency for *Culex fatigans* to disappear from those areas where they have been breeding in septic tanks improperly screened and in their effluents. Local Authorities should do all in their power to prevent collections of polluted water from forming, and much can be done by the individual citizen to assist.

LEPROSY.

The following tables show the number of patients admitted, discharged, and died, as well as the number of those under treatment at Peel Island Lazaret on the 31st December, 1933:—

WHITE INMATES.

1932.

Remaining 1st January	..	..	..	32	
Admitted	..	..	..	4	
					36
Discharged	..	..	..	3	
Deaths	..	..	..	2	
					5

Total number, December, 1932 .. 31

1933.

Remaining 1st January	..	..	..	31	
Admitted	..	..	..	3	
					34
Discharged	..	..	..	4	
Deaths	..	..	..	0	
					4

Total number, December, 1933 .. 30

COLOURED INMATES.

1932.

Remaining 1st January	..	..	..	24	
Admitted	..	..	..	12	
					36
Discharged	..	..	..	2	
Deaths	..	..	..	5	
					7

Total number, December, 1932 .. 29

1933.

Remaining 1st January	..	..	..	29	
Admitted	..	..	..	9	
					38
Discharged	..	..	..	2	
Deaths	..	..	..	4	
					6

Total number, December, 1933 .. 32

Grand totals at Lazaret, 31st December, 1932 .. 60

Grand totals at Lazaret, 31st December, 1933 .. 62

The number of inmates continues to vary slightly around the sixty mark. Six discharges compare favourably with five for last year.

The causes of death in the white males during the latter part of the fiscal year were (1) carcinoma caecum, (2) acute heart failure during an attack of influenza due to advanced fatty heart.

This year has been marked by certain innovations in treatment and from which much is hoped. These are as follows:—

1. (a) Intravenous injections of 2 per cent. solution of Brilliant Green. This dye made up in an ointment has already proved efficacious in promoting healing in leprotic ulcers. Average dose 15-20 c.c.

(b) Intravenous injections of 1 per cent. solution of Fluorescein. Average dose 10-12 c.c.

These two dyes exert a definite influence on the nodules by making them break down with discharge of contents with subsequent healing.

(c) Intravenous injection of 2 per cent. solution of Mercurochrome has been found exceptionally efficacious in controlling leprotic reactions with rapid disappearance of small acute nodules. Average dose 5 c.c.

2. Intravenous injections of graduated doses of the Gold Salts, Lopion (Bayer) and Solganal (Schering).

It is too early to report definitely on their value, but results so far obtained are encouraging. One patient who suffered from a profoundly resistant leprotic reaction in the eye, on the completion of the course gave a series of clean serums, the eye condition clearing up completely. Generally it is very hard in such conditions to prevent a certain amount of fixation of the iris in spite of liberal use of Atropine.

The patients continue to take Chaulmoogra Oil by the mouth, and also by subcutaneous injections.

In stubborn cases a reaction is elicited by means of intravenous injections of Antileprol, the reaction being controlled subsequently by Mercurochrome or treated by means of the other two dyes. Alepol is also used subcutaneously and a high degree of success has been attained in the removal of nodules and patches by means of intracutaneous injections of the drug. Where the nodules are inclined to be gross and of long duration, the use of the carbon dioxide snow pencil has been resorted to with marked advantage. The psychological outlook has been considerably brightened by means of the increase in treatment activities.

Efforts are being made continuously to beautify the surroundings of the Lazaret, and in this connection I have to thank Mr. Bick, Curator of the Botanical Gardens, for the gift of a large assortment of young shrubs. It is regrettable, however, that many of the patients will not join in the formation of working parties. I am convinced that regular work of a pleasant nature, undertaken in proportion to the patient's strength and comfort, would prove most beneficial both mentally and physically, tending to hasten recovery, while improving the amenities of their surroundings for the period of their sojourn on the island.

To augment the supply of milk, several goats were introduced on to the island. These are cared for by one of the patients and his wife and are proving very successful. Milk is an important article

in the dietary of the patients. A point of special significance also is the fact that certain tribes in Northern Africa, whose diet is largely composed of milk, do not contract leprosy to the same extent as those tribes where milk is largely absent from the dietary.

Visits of persons interested in the disease, not only from the professional but also the social point of view, have been arranged. These are much appreciated by the inmates, who enjoy the talks given by the visitors, especially when they deal with leprosy administration in other parts of the world.

Games, such as tennis and cricket, are played. A new tennis court has been successfully constructed by coloured inmates. Fishing and bathing, wireless, band concerts, and piano instruction, together with the billiard table, which is in continual use, help to lighten the isolation from family and friends, which is the main trial.

TYPHOID FEVER.

In the metropolitan area there has been a marked increase in the incidence of this disease. In the majority of instances the City Health Department has been unable to trace the origin of the disease. This is very often a difficult piece of work and success is not too easily obtained.

One series of cases is interesting, as inquiries elicited the information that all had partaken from time to time of oysters sold by an itinerant vendor. Investigations carried out by this Department's officers demonstrated that the oysters had been taken from a prohibited location in the vicinity of the outfall at the Luggage Point sewage works. They were all found to be heavily contaminated with *B. coli*. With the cessation of the sale of these oysters this small epidemic came to an end. Following a recommendation by this Department certain oyster banks were added to the "prohibited list."

Another series of cases was in the vicinity of Kedron Brook, although no definite evidence points to this brook as the cause, certainly the amenities of the neighbourhood would be considerably enhanced if its banks were straightened and much of the debris lying in the bed of the brook and retarding the flow of water were removed.

The position in the country areas has considerably improved, there being a diminution of twenty-seven cases as compared to last year. The majority of these were isolated and occurred sporadically in different Local Authority areas. The required investigation and necessary action were taken in each case.

An outbreak of thirteen cases in a hospital was investigated and found to be due to typhoid fever occurring as a complication in a female patient admitted for another condition. The disease was spread by contact infection, several nurses contracting the disease. More stringent observance of nursing rules and inoculation against typhoid fever rapidly terminated the epidemic.

Many of the cases were reported from camps of a temporary or permanent nature. In these places it is of the utmost importance that sanitation be rigidly controlled and water supplies guarded. Local Authorities would be well repaid by directing their Health Inspectors to keep a close watch on these locations.

In addition, in all cases where typhoid occurs, careful investigation should be made by the Medical Officer of Health aided by the Health Inspector, and reports of measures taken forwarded to this Department without a direction being required. In this connection the Widal reaction is of considerable service in aiding the Medical Officer of Health to arrive at a decision, as more often than not the specimens of faeces and urine, due to the long distances they are required to be sent, give negative results.

Local Authorities are again reminded that the Department is always pleased to undertake a complete examination of local water supplies. These should always be kept under observation.

PLAGUE.

The routine examination of rats and rat smears from Brisbane and other ports goes on unceasingly. Recently, in conjunction with the rat control section of the Brisbane City Council, examination of fleas taken from rats has been undertaken by this Department. The results for six weeks—28th May, 1934, to 11th July, 1934—demonstrate a flea index of 4.37 fleas per rat, of which *Xenopsylla cheopis*—the plague flea—predominated. The work is proceeding together with the increased number of rodents destroyed. These results, unfortunately, show that Brisbane is still vulnerable to a visitation of plague.

SCARLET FEVER.

Scarlet fever shows a tendency to decline in incidence in the country areas with a small increase in the metropolitan area. The disease continues to be mild in nature. The number of deaths in the metropolis and country areas for the calendar year totalled two.

TUBERCULOSIS.

The following table shows the number of cases of tuberculosis notified to the Department of Public Health and deaths notified to the Registrar-General, Queensland, for the years 1929-1933 :—

Year.					—	Metropolitan Area.				Outside Areas.			
1929	..	..	..	..	Cases	..	..	..	..	147	229		
					Deaths	..	..	..	..	146	211		
1930	..	..	..	..	Cases	..	..	..	..	161	182		
					Deaths	..	..	..	..	145	254		
1931	..	..	..	..	Cases	..	..	..	..	146	144		
					Deaths	..	..	..	..	160	193		
1932	..	..	..	..	Cases	..	..	..	..	107	137		
					Deaths	..	..	..	..	128	222		
1933	..	..	..	..	Cases	..	..	..	..	105	101		
					Deaths	..	..	..	..	133	222		

It is obvious from the above figures that all cases of tuberculosis are not being notified. This is regrettable, as early notification would go far towards controlling the disease, providing the contacts were visited and examined and kept under surveillance together with advice on home hygiene.

The following is the report of the part-time Medical Officer of the Tuberculosis Bureau, Brisbane :—

“ During the year 1st July, 1933, to 30th June, 1934, thirty-five patients were seen for the Tuberculosis Bureau. Of these five patients were seen twice, five patients were seen three times, one patient was seen five times, one patient was seen eleven times. Of the thirty-five patients seen, four were sent to Dalby Sanatorium, nine were sent to Diamantina Hospital, and one to Brisbane Hospital.”

MALARIA.

This fiscal year has been marked by an extensive epidemic of malaria in the Torres Strait Islands. It was mainly confined to the native population there. Examination of blood smears has demonstrated the presence of *Plasmodium vivax*. The type is therefore Benign Tertian.

Recently, in conjunction with this Department, the Aboriginal Department tried out a supply of Atebrin. The results were satisfactory. I would urge that the greatest attention should be paid to the control of malaria in these islands, not only by having plentiful supplies of the necessary drugs maintained on the islands but by the initiation of measures directed against the breeding of mosquitoes.

Malaria is present to some extent in the hinterland of Cairns. All Local Authorities should exercise continual control of mosquito-breeding, as there is ever the danger of the disease being spread southwards. In Brisbane, *Anopheles annulipes* is easily found. This mosquito has been shown experimentally to be capable of carrying the disease. Already one or two isolated cases have been reported as arising *de novo* in Brisbane. Careful inquiry has failed to show that the disease in these cases could have arisen anywhere else. It is therefore possible that, under ideal conditions, the *A. annulipes* could be the natural vector of the disease in southern areas.

WEIL'S DISEASE—EPIDEMIC JAUNDICE.

In February, 1934, the Medical Officer of Health of Hinchinbrook Shire, Ingham, reported that there were about thirty cases of severe jaundice with four deaths for the six months previously and expressed an opinion that the disease was Weil's disease. At that time severe tropical rains were being experienced and the country side was much under water. Arrangements, however, were made for a supply of live rats trapped on the cane fields to be forwarded to the Commonwealth Health Laboratory, at Townsville, in an endeavour to isolate the *Leptospira icterohæmorrhagiæ*.

The disease broke out again in June, when five cases were reported. The season was again very wet for the time of the year. The disease was confined to male canecutters of the Ingham district.

The Medical Officer in Charge of the Commonwealth Institute, Townsville, proceeded immediately to Ingham and inoculated guinea pigs with blood and urine taken from the patients, but without result. [At the moment of going to press it is reported that the *Leptospira icterohæmorrhagiæ* has been isolated from rats and patients. The diagnosis of Weil's disease is definitely established. This being the first recorded instance of Weil's disease in Australia, much credit is due to Doctors G. C. Morrissey and T. Leckie for having clinically diagnosed the disease, and to Dr. J. T. Cotter, of the Commonwealth Institute, Townsville, for having isolated the causative organism and proved the correctness of their diagnosis. Rats abound in the district. A full report, when all details are finalised, will be published at a later date.]

Epidemics of this nature should act as warnings that it is dangerous to allow health services to languish. A health organisation to be successful must never be allowed to become static, as, immediately it does, it is doomed to failure. It must also be remembered that the first duty of the public health service is prevention of disease, not the spectacular crushing of epidemics. Therefore, if such a principle of success is to be attained, properly-trained Health Officers must be maintained, and adequately supported. (Local Authorities are again informed that Weil's disease, coastal fever, Mossman fever, and Sarina fever have been made notifiable under the Health Acts for the whole of the State.

VENEREAL DISEASES.

(Health Acts, 1900-1931.)

Report for the Twelve Months ending 30th June, 1934.

The term "Venereal Disease" includes gonorrhœa, ophthalmia neonatorum (gonorrhœal), syphilis (all stages), soft chancre, ulcerative granuloma, and venereal warts.

NOTIFICATIONS.

During the twelve months under review 1,576 persons were notified (anonymously) as suffering from venereal disease—as compared with 1,464 for the previous twelve months. As some of these patients had more than one venereal disease, this number represented 1,606 cases of venereal disease as compared with 1,513 cases during 1932-33.

It is gratifying to note that many practitioners are acceding to my request that the exact stage and type of the disease be stated on the notification form. One purpose of notification is to enable Public Health Officers to determine the trend of the incidence of disease from year to year, and with a disease such as syphilis, with its varied phases and protean manifestations, no true idea can be obtained unless this be done.

Syphilis.—Three hundred and sixty-six of these cases were syphilitic as compared with 374 in 1932-33. Unfortunately, 74 of these cases represent the first and second stages as compared with 64 in 1932-33, and this would suggest an increase in the incidence of fresh infections with syphilis. However, until the figures for unspecified syphilis are investigated more fully, such a deduction may be premature. It is hoped that as this portion of the Department's activities become better co-ordinated and supervised these unspecified cases will become properly classified.

Gonorrhœa.—One thousand two hundred and sixteen of the cases were for the various gonorrhœal infections (excluding ophthalmia), as compared with 1,118 for 1932-33. An arresting fact in these figures is the 71 cases of female children of pre-pubertal age infected with gonorrhœa—surely eloquent proof and warning of the infectiousness of gonorrhœa, apart from sexual relations.

Other Forms of Venereal Disease.—These account for the balance of the cases headed by 11 cases of ulcerative granuloma. In a country so largely tropical as Queensland one would like to see these cases more fully investigated. The term "ulcerative granuloma" may include granuloma inguinale, lympho-granuloma inguinale, or any other condition giving rise to chronic ulcerations about the pudenda.

Another interesting point in connection with these tropical and sub-tropical cases is that there is little definite information regarding yaws in tropical Queensland. In view of the fact that Professor Blacklock has brought forward fresh evidence that yaws may be merely tropical syphilis as seen in persons of uncleanly and unhygienic habits, it would be of definite interest and value to determine the extent (if any) of yaws in North Queensland.

The following table gives a dissection of the notifications received for the twelve months under review:—

SUMMARY OF NOTIFICATIONS.

Nature of Disease.				District.				Males.		Females.		Totals.	
<i>Single Infections.</i>													
Gonorrhœa—													
Unspecified	Metropolitan	..	..	124	}	301	28	}	57	358
				Outside	..	..	177			29			
Acute	Metropolitan	..	..	376	}	487	79	}	111	598
				Outside	..	..	111			32			
Sub-acute	Metropolitan	..	..	26	}	46	29	}	42	88
				Outside	..	..	20			13			
Chronic	Metropolitan	..	..	18	}	39	15	}	31	70
				Outside	..	..	21			16			
Rectal	Metropolitan	..	..	1	}	1	..	}	..	1
				Outside	..	..	..			..
Vulvo-vaginitis		Metropolitan	..	..	..	}	..	15	}	71	71
				Outside	..	..	..			56			
Ophthalmia	Metropolitan	..	..	2	}	2	2	}	2	4
				Outside	..	..	..			..
Syphilis—													
Unspecified	Metropolitan	..	..	11	}	18	8	}	15	33
				Outside	..	..	7			7			
Primary	Metropolitan	..	..	29	}	32	1	}	2	34
				Outside	..	..	3			1			
Secondary	Metropolitan	..	..	7	}	18	7	}	22	40
				Outside	..	..	11			15			
Tertiary	Metropolitan	..	..	14	}	37	14	}	31	68
				Outside	..	..	23			17			
Latent	Metropolitan	..	..	52	}	63	23	}	30	93
				Outside	..	..	11			7			
Neuro	Metropolitan	..	..	1	}	7	..	}	1	8
				Outside	..	..	6			1			
Congenital (heredo)	Metropolitan	..	..	17	}	29	18	}	34	63
				Outside	..	..	12			16			
Soft chancre	Metropolitan	..	..	..	}	1	..	}	..	1
				Outside	..	..	1			..			
Ulcerative granuloma	Metropolitan	..	..	..	}	7	1	}	4	11
				Outside	..	..	7			3			
Venereal warts	Metropolitan	..	..	4	}	5	..	}	..	5
				Outside	..	..	1			..			
<i>Double Infections.</i>													
Gonorrhœa and—													
Gonorrhœa (ophthal)	Metropolitan	..	..	..	}	..	1	}	1	1
				Outside	..	..	..			..
Venereal warts	Metropolitan	..	..	..	}	..	1	}	1	1
				Outside	..	..	..			..
Syphilis (unspecified)	Metropolitan	..	..	1	}	5	1	}	1	6
				Outside	..	..	4			..			
Syphilis (secondary)	Metropolitan	..	..	1	}	1	..	}	2	3
				Outside	..	..	..			2			
Syphilis (tertiary)	Metropolitan	..	..	..	}	7	1	}	6	13
				Outside	..	..	7			5			
Syphilis (latent)	Metropolitan	..	..	2	}	4	2	}	2	6
				Outside	..	..	2			..			
				Metropolitan	..	..	686	}	1,110	246	}	466	1,576
				Outside	..	..	424			220			

Actually, 1,715 notifications were received, but of these 139 were duplicated through patients changing to another medical adviser.

Sources of Notification.—Of the total notifications received 31.6 per cent. were from private practitioners as compared with 28 per cent. last year. The actual figures are shown in the table (exclusive of duplicate notifications).

SOURCES OF NOTIFICATION.

Treatment Centre.										Metropolis.	Outside Metropolis.	Totals.
Clinics .. .. .	..	..	..	..	..	..	..	..	..	462	158	620
Private practitioners .. .. .	..	..	..	..	..	..	..	..	..	221	277	498
Hospitals (other than Clinics) .. .. .	..	..	..	..	..	..	..	..	..	249	209	458
Totals .. .. .	..	..	..	..	..	..	..	..	..	932	644	1,576

Stated Sources of Infection.—As pointed out in previous reports, the professional woman is not the worst offender in this respect. Most of these women take care of themselves for business reasons alone. The sexually promiscuous amateur is the most frequent source of infection.

At the male clinic in Brisbane every effort is made to ascertain the source of infection, and, as a result, during the twelve months 42 alleged sources of infection were definitely known to have been induced to seek examination and treatment—the majority at the William street (female) clinic. There is also evidence that many others sought attention as a result of advice given their consorts, but as names cannot always be obtained these latter cannot be verified.

STATED SOURCES OF INFECTION.

Sources ascribed to—	AREA.		Totals.
	Metropolitan.	Outside Metropolis.	
Prostitutes in houses	37	36	73
Prostitutes unknown	96	91	187
Non-professionals	312	120	432
Husbands	13	14	27
Wives	22	6	28
Parents	33	25	58
Occupational (prostitutes)	64	21	85
Gins, half-castes, &c. .. .. .	..	16	16
Extra-genital	2	..	2
Sodomy	1	..	1
Sisters .. .. .	..	2	2
Criminal assaults	1	2	3
Unknown or unstated	351	311	662
Totals	932	644	1,576

Defaulters.—During the twelve months there were 315 defaulters, representing 20 per cent. of the total notifications received. This compares with 27 per cent. for the previous twelve months. Of these 217 were traced and 211 resumed treatment.

SUMMARY.

	Male Clinic (Hope Street).	Other than Hope Street.	State Totals.
Defaulters—			
Notified	249	66	315
Resuming treatment	171	40	211
Not located	72	13	85
Enquiries continuing	6	7	13
Left the State .. .. .	..	..	6

CLINICS.

Facilities for treatment are provided by two *ad hoc* centres (one male and one female) in Brisbane. Also where such centres are not available all subsidised public hospitals in the State are required to treat any case applying for treatment, and certain of the larger country hospitals have more or less elementary clinic facilities attached.

Metropolitan Male Clinic (Hope Street).—This is virtually a continuous clinic with three sessions daily, but its cramped space prevents the expansion necessary to deal with the refinements of technique essential to adequate and satisfactory treatment in many cases. Moreover, it lacks one of the main essentials of such a place in that it is not centrally situated. However, with the proposed removal of the Health Department to new quarters it is hoped that both these objections will be remedied by the erection of a building specifically designed for the purpose.

An abbreviated summary of the male clinic operations, with corresponding figures, for the previous few years is shown in the following table:—

	1933-34.	1932-33.	1931-32.	1930-31.	1929-30.
Consultations (M.O.)	10,795	10,826	10,388	9,761	9,124
New cases	674	783	756	771	727
Notified (venereal)	407	440	434	445	437
Blood specimens for W.R.	1,535	828	731	953	667
Blood specimens for C.D. (Gon.)	423	485	457	..	..
Dark ground examinations	33	40	40	31	15
Smears (Gonococci)	2,041	2,315	2,423	2,488	2,070
"914" administered	1,140	927	912	1,306	1,455
Bismuth administered	1,338	1,297	1,464	1,582	1,427
Prescriptions dispensed	1,829	1,797	2,475	3,110	2,455
Seamen's cards issued	6	7	8	17	13
Certificates of apparent cure	209	231	213	221	200

Of the 674 new patients at the male clinic who reported for examination during the year, 407 were diagnosed as suffering from venereal disease.

SUMMARY OF DIAGNOSES.

Disease.	Notification ex Clinic.	Notification elsewhere.	Totals.
Acute Gonorrhœa	295	5	300
Sub. Acute Gonorrhœa	18	1	19
Chronic Gonorrhœa	13	1	14
Rectal Gonorrhœa	1	..	1
Primary Syphilis	23	..	23
Secondary Syphilis	2	1	3
Tertiary Syphilis	8	..	8
Latent Syphilis	39	..	39
Congenital Syphilis	2	..	2
Acute Gonorrhœa and Primary Syphilis	1	..	1
Acute Gonorrhœa and Latent Syphilis	2	..	2
Venereal Warts	3	..	3
Totals	407	8	415

A disquieting feature of these is the number of cases in whom a routine blood test discloses the presence of syphilis. None of these cases reported for syphilis *per se*, and were only diagnosed as suffering from latent syphilis after several tests by both the complement deviation and precipitation methods. Without routine examination in all cases these 39 latent syphilitics would have been missed.

At the end of the fiscal year under review, there were 434 patients attending the clinic as compared with the same number at 30th June, 1933, and for purposes of comparison a statement covering a five-yearly period is appended.

Nature of Disease.	1933-34.	1932-33.	1931-32.	1930-31.	1929-30.
Gonorrhœa	197	212	188	188	214
Syphilis (all stages)	140	135	125	133	153
Gonorrhœa and Syphilis	42	25	26	28	20
Venereal Warts	1	3	2	..	1
Venereal Warts and Syphilis	1	..	..	..	..
Nil Definite	10	19	..	..	..
Other Genital Conditions	13	29	..	..	..
Undiagnosed at date of report	30	11	88	61	45
Totals	434	434	429	410	433
Actual Venereal Cases	381	375	341	349	388

Female Clinic (William Street).—This centrally-situated little unit is continuing to do good work. The actual number of new cases reporting have probably reached a maximum under existing conditions. There are, however, many more cases who might be induced to attend by more active propaganda and inquiry, and here, once again, the good work which medical men in charge of male patients can do by tactful inquiry and advice may be reiterated.

A short summary of operations with some figures for previous years is shown:—

—	1933-34.	1932-33.	1931-32.*	1930-31.	1929-30.
Consultations (Medical Officer)	2,351	2,103	1,472	..	..
New Cases	142	147	83	98	84
Notified (Venereal)	73	77	65	38	29
" 914 " administered	515	370	137	..	..
Bismuth administered	407	404	148	..	..
Local Treatments	1,396	1,464	854	..	..

* Eight months.

The following table shows the number of prostitutes examined at the metropolitan and country centres and the numbers committed to institutions for treatment. Some figures for previous years are shown for comparison:—

Year.	METROPOLIS.		OUTSIDE METROPOLIS.	
	Examined.	Detained.	Examined.	Detained.
1929-30	847	64	993	41
1930-31	892	71	944	34
1931-32	845	68	956	34
1932-33	637	72	716	25
1933-34	665	54	713	33

PROPAGANDA AND GENERAL REMARKS.

During the year three addresses were given by the Medical Officer to interested bodies, and in addition certain figures and information were supplied to inquirers who were desirous of addressing gatherings. There have also been inquiries for literature upon the subject, but at present we have no suitable or up-to-date pamphlets for distribution. The financial stringency of recent years has necessitated a curtailment of these activities, but it is anticipated amends will be made during the next twelve months.

A few years ago it was mentioned in the report that it was desired to make the Venereal Branch of this Department an educational as well as a therapeutic and statistical centre. Information has been collected and periodicals filed with this object in view. During the past twelve months it is pleasing to have had inquiries from medical men regarding the trend and methods of modern treatment. Such information is always gladly supplied, and it is hoped will be still further availed of during the ensuing twelve months.

Owing to the prolonged treatment necessary in many cases of syphilis, the cost of arsenical drugs to the patient may be considerable. Many patients will not attend a public institution, and, unable to afford the cost of full and complete courses of treatment privately, compromise by having what they can afford and then defaulting. Unfortunately it is these cases who have received subcurative doses of treatment who develop the late mental and physical disabilities of syphilis such as insanity, paralysis, and organic heart disease.

The monthly incidence was fairly constant, except for somewhat greater numbers in January and March, which were probably not unrelated to the holiday seasons.

PROSECUTIONS, 1933-34.

Section 162 (3), Health Acts	13 males, all in Brisbane (and 1 outstanding)
Section 162 (5), Health Acts	1 male, in Brisbane (Failure of doctor to notify)
Regulation 8, V.D. Regs. 1933	5 males and 2 females, in Brisbane (Official form G.)
Regulation 9, V.D. Regs. 1933	16 females in Brisbane, and 2 in outside areas (and 1 outstanding)
Summary	19 males and 20 females = (39 cases)
Fines and costs imposed totalled £56 9s.	

MARITAL STATES OF NEW CASES NOTIFIED, 1933-34.

—	July.		Aug.		Sept.		Oct.		Nov.		Dec.		Jan.		Feb.		Mar.		Apr.		May.		June.		Totals, 1933-1934.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Married—																											
Metropolitan	12	8	14	12	6	6	14	1	10	8	16	6	17	9	10	5	14	10	9	10	18	5	13	5	153	85	
Outside ..	7	6	6	8	4	7	5	3	6	7	11	7	4	5	7	5	11	6	3	3	8	2	5	7	77	66	
Single—																											
Metropolitan	50	13	44	9	40	19	39	7	31	18	37	12	42	21	39	18	64	8	35	10	44	6	47	9	512	150	
Outside ..	19	5	14	7	26	8	23	3	54	13	57	62	19	5	36	11	27	9	6	2	25	9	21	10	327	144	
Separated—																											
Metropolitan	..	2	..	..	1	..	2	..	1	1	1	..	1	1	3	..	..	1	..	..	1	..	3	..	13	5	
Outside ..	..	..	1	..	..	..	..	..	3	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	
Widowed—																											
Metropolitan	1	..	..	..	..	..	..	..	..	..	1	2	..	1	..	1	..	..	..	..	1	..	1	..	4	4	
Outside ..	2	..	..	1	..	2	..	..	1	..	4	..	..	1	..	1	..	..	1	..	..	..	..	..	8	5	
Divorced—																											
Metropolitan	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	2	1	
Outside ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	
Unknown—																											
Metropolitan	..	..	1	..	..	2	..	..	3	..	2	..	..	1	..	1	..	..	1	..	..	..	..	..	2	1	
Outside ..	..	..	1	..	..	..	..	..	..	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	7	4	
Totals—																											
Metropolitan	63	23	59	21	47	25	55	8	42	27	55	20	60	33	52	24	79	19	45	21	64	11	65	14	686	246	932
Outside ..	28	11	22	16	30	19	28	6	67	20	75	69	23	12	44	18	38	15	10	5	33	11	26	18	424	220	644
																									1,110	466	1,576

SOURCES OF NOTIFICATION, 1933-34.

Clinics ..	42	16	31	4	28	27	35	11	28	14	26	11	51	1	35	22	57	23	29	11	45	7	55	11	462	158	620
Private Doctors ..	20	20	20	10	16	20	19	19	15	49	22	54	20	21	21	26	20	18	17	1	19	23	12	16	221	277	498
Hospitals ..	24	3	29	24	28	2	9	4	26	24	27	79	22	13	20	14	21	12	20	3	11	14	12	17	249	209	458
Totals ..	86	39	80	38	72	49	63	34	69	87	75	144	93	35	76	62	98	53	66	15	75	44	79	44	932	644	1,576
	125		118		121		97		156		219		128		138		151		81		119		123				

AGES V.D. CASES NOTIFIED, 1933-34.

—	Metropolitan Area.			Outside Area.			Totals.		
	Males.	Females	Total.	Males.	Females.	Total.	Males.	Females	G. Total.
Unknown or unobtainable ..	13	9	22	19	7	26	32	16	48
1 year	1	3	4	..	1	1	1	4	5
2 years	1	1	2	1	1	2	2	2	4
3 years	1	5	6	..	2	2	1	7	8
4 years	1	1	2	..	9	9	1	10	11
5 to 10 years	7	9	16	6	47	53	13	56	69
11 to 15 years	4	10	14	7	17	24	11	27	38
16 to 20 years	78	47	125	42	22	64	120	69	189
21 to 25 years	188	68	256	95	35	130	283	103	386
26 to 30 years	154	36	190	88	29	117	242	65	307
31 to 35 years	80	29	109	69	20	89	149	49	198
36 to 40 years	54	12	66	37	13	50	91	25	116
41 to 45 years	43	7	50	27	13	40	70	20	90
46 to 50 years	34	4	38	16	3	19	50	7	57
51 to 55 years	15	2	17	7	..	7	22	2	24
56 years and over	12	3	15	9	2	11	21	5	26
Totals	686	246	932	423	221	644	1,109	467	1,576

SANITATION.

The following is an outline of the work accomplished by the Sanitary Inspectors' Staff in matters relating to sanitation for the year ending 30th June, 1934.

The many and varied duties which come under the title of "sanitation" have kept the staff fully engaged during the year under review. Much more might have been accomplished had the financial position improved, in which case more country investigations would have been made.

The following inspections have been carried out:—

General inspections	2,889
Nuisances	150
Sanitary depots and services inspected	63
Garbage depots and services inspected	56
Official calls	204
Drainage nuisances inspected	97
Tanneries inspected	2
Total	3,461

The sanitary circumstances of cities and towns surveyed continue to improve. The provision of standard flyproof cabinet pansteads has been the means of materially reducing the incidence of fly-borne diseases. The organisation and supervision of nightsoil and refuse collection continue to be carried out in an efficient and cleanly manner, and regular and well-conducted services are being given to the public. The regular and systematic inspection of these activities by the Local Authorities Health Inspector is the controlling factor in the maintenance of these organised efforts to better the health environment of the various areas under his control.

During the year rodent destruction has been carried out in the following centres:—Brisbane, Ipswich, Gympie, Maryborough, Bundaberg, Rockhampton, Mackay, Townsville, and Cairns. Brisbane City delivers all rats for examination to the Department's Laboratory; Ipswich, Gympie, Maryborough, and Bundaberg send their specimens to this office for examination, whilst the examination for Rockhampton, Townsville, and Cairns are made by the Commonwealth Laboratories of each respective town and monthly reports are made to this office. By this method it will be seen that the Department is kept in close touch with the whole coastline, and should an infected rodent be detected intensive methods could immediately be put into operation.

The number of rats caught in the metropolitan area for the twelve months ending 30th June, 1934, was as follows:—

Rats caught	41,467	Rats examined	34,984	Mice examined	2,123
Mice	3,001	Rats not examined	6,483	Mice not examined	878
Total	44,468	Total	41,467	Total	3,001

All seaside resorts were visited before the holiday season in regard to sanitary executive, and camping areas were also inspected. Improvements are noticeable, especially in regard to camps, which are now better controlled, owing to the provisions of the Camp Regulations, which give the required authority to the Councils and their officers to see that proper order and cleanliness are kept in these approved areas.

At the request of the Home Secretary a tour of inspection was made of the various hostels and unemployed camps, and an extensive report on their condition was made.

Mudgeeraba was visited and a house-to-house inspection carried out and the method of disposal of nightsoil looked into. As a result a report, with recommendations for future guidance, was submitted.

A special visit of inspection was made to Burleigh Heads re the drainage at the hotel, and advice given as to the carrying out of the work.

Cherbourg Aboriginal Settlement was visited owing to a drainage nuisance, and a report and recommendations made for the abatement thereof.

Owing to repeated complaints Woodford was visited and inquiries made as regards the pollution of the creek from a piggery. Recommendations were submitted and advice given and the work has since been carried out, which should result in the nuisance being abated.

Maryborough was visited for the purpose of investigating the proposed discontinuance of a sanitary service in the Burrum Shire. The matter was thoroughly investigated, and a report made advising its continuance.

Mundubbera was visited and an inspection, report, and recommendations made of work required to be done at the infectious diseases hospital at that town. This work, I am informed, has since been carried out.

At the request of the Kingaroy Hospital a journey was made to that centre to advise on the disposal of the drainage from that institution, and the proposed septic tank. The ground was gone over and advice given accordingly.

Ipswich was visited, in company with the State Health Officer, for the purpose of selecting a site for the proposed incinerator for that city, and a report and recommendations were submitted.

Murgon was visited at the request of the Council in regard to the disposal of hotel drainage, and a report was made and advice tendered for its ultimate disposal.

A visit of inspection was made to Gympie, and it was pleasing to note the progress in sanitation and drainage which is being made in that city. The long-felt want of proper drainage is now being given the prominence due to that essential work, and the Council and its engineer are to be congratulated on the work now being carried out—i.e., the reconstruction of the sewer through the main portion of the town, which will not only do away with many drainage nuisances but also reclaim a lot of valuable ground in the business centre.

Dunwich was visited and an inspection and investigation into sanitary matters was made. A report and recommendations were drafted and advice given to the Medical Superintendent as to the proper methods of collection and disposal of nightsoil.

Sanitary contracts for the following areas were perused and amended, where necessary:—Tinaroo Shire, Cairns Shire, Laidley Shire, Yeulba, Wallumbilla, and Bribie Island.

Garbage contracts were submitted for approval for the following towns:—Ayr and Brandon.

By-laws were submitted for approval by the following Local Authorities:—Emerald, Winton, and Blackall.

During the fiscal year the following towns were also visited:—Chinchilla, Miles, Taroom, Yeulba, Wallumbilla, Roma, Injune, Amby, Muckadilla, Mitchell, Mungallala, Morven, Charleville, Augathella, Wyandra, Cunnamulla, Thargomindah, Quilpie, Caloundra, Tewantin, Maroochydore, Bundaberg, Bagarra, Maryborough, Cooran, Pomona, Cooroy, Eumundi, Yandina, Bribie, Redcliffe, Dayboro, Goodna, Redbank, Ipswich, Nambour, Woombye, Palmwoods, Mooloolah, Beerwah, Landsborough, and Caboolture.

It is pleasing to note the advance in sanitary executive in the various towns. Mackay is now installing an up-to-date sewage scheme for the whole town, which, when completed, will be a decided advance and tend to the betterment and healthiness of this area, and the Council is to be congratulated on its forethought and large-mindedness in carrying the scheme to a successful issue. Drainage matters have also been improved in the township of Cunnamulla.

Blackall also is improving its drainage.

Stanthorpe is also now improving its drainage by installing a foul-water drainage scheme which will eliminate the many nuisances caused by the discharge of foul wastes into the water channels.

These improvements will certainly add to the better living conditions in these communities.

Hotel Sanitation.

The improvements marked in former years are still being maintained, practically all orders and instructions given by the Licensing Inspectors having been carried out. While not being too hard, owing to the financial stringency, the Inspectors have insisted on the absolute necessities being carried out, and, as a result, the written complaints which were constantly being received have now almost disappeared.

PARTICULARS OF INSPECTIONS.

Number of hotels inspected	488
Objections lodged	129

TOOWOOMBA AND DISTRICT.

The District Inspector submits the following details:—

TOWN AND COUNTRY INSPECTIONS.

Number of inspections.. .. .	1,478
Official calls	169
	<hr/>
	1,647
Number of nuisances	103
Number of sanitary depots inspected	31
Number of garbage tips inspected	47
Number of towns visited	31
Number of miles travelled—	
By car	194½
By train	1,284

Health Inspectors to Local Authorities whose areas have been visited are apparently fulfilling their duties with the tact and application required to realise the best results. A steady improvement is noted in all areas, and a marked change for the better is noteworthy in the areas of Allora, Cambooya, and Clifton, particularly in the lastnamed, where a change in the control of the nightsoil disposal has evinced the many failings of the late management.

The maintenance of the sewage purification works at Wetalla (Toowoomba) has been considerably improved since my previous report, but the pollution of Gowrie Creek from this and other sources still continues. Mosquito control measures continue to be of paramount importance in Toowoomba, and this results in a city comparatively free from the pest.

Hotel Sanitation.

Licensing districts visited:—Toowoomba, Warwick, Stanthorpe, Inglewood, Texas, Crow's Nest, Oakey, and Dalby.

My duties under the Liquor Act resulted in inspections as detailed in the list hereunder:—

Number of hotels inspected	155
Number of objections lodged	45
Number of hotels reinspected	55

In addition to objections arising out of the usual routine inspections, it was found necessary to file objections requiring the total demolition and reconstruction of two very old and dilapidated hotel structures in the Licensing District of Warwick. The objections in question were not contested and the Licensing Magistrate has duly adjourned the final hearing of same, pending the respective owners fulfilling the undertakings given to the Court to submit plans and specifications of new structures for approval within one month and three months respectively.

A good standard of general sanitation and sleeping accommodation is now provided at most of the licensed premises situated within the Licensing Districts already mentioned, but the stress of the depression still stands in the way of the attainment of better water supplies and the improved conditions of sanitation which might be reasonably demanded if normal times prevailed.

ROCKHAMPTON AND DISTRICT.

The district inspector submits the following details:—

Number of inspections.. .. .	1,216
Number of official calls	96
Number of nuisances	38
Number of sanitary depots inspected	26
Number of rubbish tips inspected	20
Number of towns visited	22
Number of miles travelled—	
By train	2,464
By car	192

The usual duties appertaining to general sanitation have been carried out during the year, and much good work has been accomplished.

Regarding the City of Rockhampton, it was found necessary to select a new area for the disposal of nightsoil for the north side of the river. A site on the Yaamba road was selected and approved. All the plant from the old site will be removed and re-erected there. Although this move will entail a little extra haulage, the advantages gained in other ways will compensate. Condi-

tions at the sanitary depots and rubbish tips have, on all occasions, been found to be satisfactory. The filling in and covering of the old disused quarry in Jardine street has removed a traffic danger and a mosquito-breeding ground.

The question of the destruction of refuse from the snap cotton machines at the cotton ginnyery has also been dealt with. Action was first taken in this regard owing to the refuse becoming decomposed as a result of moisture, and flies began to breed in it. Special attention has also been paid to piggeries within the town boundary. The Local Authority has taken action in several instances to compel property-owners whose properties are within the prescribed distance of a sewer as laid down in the Health Act (section 41) to connect to such sewers, with the result that in all cases the nuisances have been abated.

Special visits were made to Mount Scoria and Marlborough, to the former in connection with the selection of a cemetery site and to the latter in connection with a sanitary depot.

The usual regular tours in country districts have been made, and in each case reports were submitted to headquarters. Generally speaking, sanitary matters were found to be very satisfactory.

<i>Hotel Sanitation.</i>							
Number of hotels inspected	..	..	..	..	..	..	107
Number of objections lodged	..	..	..	..	..	..	48
Number of reinspections	..	..	..	..	..	..	8

The objections raised against several hotels comprised alterations to bathrooms, sanitary conveniences, and, in some cases, bedrooms and drainage alterations. Many of the hotels have been repainted during the year. Country hotels are steadily being brought up to the requirements of the regulations, and, in most cases, their condition is very fair.

MACKAY AND DISTRICT.

The following particulars were furnished by the inspector in charge of the district for the year ending 30th June, 1934:—

<i>Sanitary Inspections.</i>							
Number of inspections..	..	..	..	..	..	..	1,457
Number of official calls	..	..	..	..	..	..	93
Number of nuisances inspected	..	..	..	..	..	..	76
Number of sanitary depots inspected	..	..	..	..	..	..	16
Number of refuse tips inspected	..	..	..	..	..	..	24
Number of towns visited	..	..	..	..	..	..	42
Number of miles travelled—							
By car	..	..	..	..	..	..	560
By train	..	..	..	..	..	..	788
Total	..	..	..	..	..	..	1,348

The whole of the areas visited were in fair order. Since the advent of the full-time inspectors, the Shire sanitary depots have been improved by the installation of proper equipment for cleansing purposes.

The underground sewerage scheme for the City of Mackay has been finalised and the work commenced in the last week in June.

A special inspection of that part of the city known as Chinatown was made in conjunction with the councillors and their Health Inspector with a view to improvement or demolition.

Sanitation is very fair and shows a marked improvement since separate control of the city from the shires took place. Each inspector can now devote his whole time to health matters without any overlapping. The city and shires have moved strongly in immunisation against diphtheria. The following number of children have been treated:—Mackay 334, Pioneer 1,100, Mirani 250, and Sarina 600.

TOWNSVILLE AND DISTRICT.

The inspector in charge of the area reports the following particulars for the year ended 30th June, 1934:—

Inspections	..	..	..	..	..	..	..	1,051
Official calls	..	..	..	..	..	..	..	161
Nuisances	..	..	..	..	..	..	..	73

Routine sanitary inspections were carried out from time to time, and conditions calling for improvement were reported to the council's officer concerned. Action in each instance was taken. The collection and disposal of nightsoil are carried out on a very satisfactory, efficient, and well-organised system. No complaints were received at this office. The collections of the city's refuse is not at all in keeping with a city such as Townsville. A fortnightly service in the residential centres, which

cannot be regarded as adequate for a tropical city of 30,000, is in vogue. In the business portion the collection is carried out in a desultory manner. The disposal of refuse is being well carried out, the refuse being used for street formation over swampy low-lying land. The standard refuse bin is absent from nearly all premises, and, in consequence, this office is enforcing tenants of all food shops and licensees of hotels to provide the necessary bins for refuse. Rats are numerous. This is not surprising, owing to the amount of rubbish and lumber on many premises which forms an excellent harbourage for the rodents.

The council are now employing a man on full time on rat extermination work, and more efficient work will now be carried out. The council provide poison baits free.

Mosquitoes are ever present. Spraying of swampy areas and other places is being done.

The council recognises the great necessity for a sewerage scheme, and, with this end in view, have given instructions to have a comprehensive scheme prepared so that no delay will occur immediately the water scheme is finished.

In the routine inspection work many matters were investigated, among which were complaints of septic tanks, complaints of nuisance caused by the *Trochus* shell fly, and serious smoke nuisance in the centre of the city. In each case the nuisance was suitably dealt with.

The advisability of installing the septic system at the Ross Island State School was inquired into and fully discussed with the District Supervisor of Works.

Inspections were carried out at Magnetic Island, and a new sanitary depot at Arcadia was inspected in company with the City Inspector and Chairman of the Health Committee.

The following towns were visited and reports on each place submitted:—

Charters Towers.—Nightsoil removal is carried out by the council under the supervision of their Health Inspector. The service is well organised and efficiently carried out. The garbage removal is done by contract, but efficient operations are handicapped by the absence of standard bins.

An active campaign is being waged against mosquitoes, spraying of breeding grounds being actively carried out.

The construction of a concrete culvert on the line of the main drain, which work is now in hand will eliminate one of the main breeding-grounds of *C. fatigans*. The sanitary conditions of the town are steadily improving.

Cloncurry.—The sanitary services are being carried out in an efficient manner. The buildings and plant at the depot, although not up to requirements, are serviceable and clean. The necessity for supervision in regard to making cabinets flyproof, enforcing the Mosquito Regulations, and removing accumulations of rubbish from yards and vacant allotments was reported for the council's attention.

Duchess.—The Duchess township has gone the way many mining towns have gone. There are very few buildings left; cesspits in use are well constructed, flyproof, and clean.

Mount Isa.—The present housing conditions are below the standard for healthy and comfortable living, but as the town develops this state of affairs should disappear. The council have been requested to have the conditions at all boarding-houses brought into line with their by-laws.

An inquiry was made into the source and distribution of domestic water supplies, and a full report, with a draft of suggested regulations for the protection of the supplies, was submitted. A scheme for providing a reticulated supply from the mines main is being pushed ahead by the council. The sanitary contracts are well carried out.

Ayr, Home Hill, and Brandon.—Matters pertaining to public health are well supervised in this area. The result of systematic house to house inspection is a very satisfactory condition sanitarily. It is unfortunate that the council have not yet established a weekly garbage service for the business section of Ayr. The necessity was proved during the survey by the number of accumulations of rubbish observed.

At *Home Hill* a mosquito-breeding swampy area of land is being reclaimed with refuse. The tip presents a clean and orderly appearance and is well covered.

Ingham.—The sanitary circumstances of this town were found satisfactory. Good work is being done at the depot. Refuse is being used for land reclamation and is being well covered.

Halifax.—This township was found in a clean and satisfactory condition. The sanitary services are well maintained.

Macknade.—The chief source of complaint in this area is the nuisance caused by the discharge of wastes from the sugar-mill on to swampy lands. The company is considering proposals for the abatement of this nuisance.

Hotel Sanitation.
Licensing Districts.

	Townsville.	Ayr.	Cloncurry.	Ingham.
Number of hotels	48	12	10	12
Number of objections	26	6	..	..
Reinspections	112	..	..	..
Total hotels .. .. .	.. .. .	.. .. .	.. .. .	82
Total objections .. .. .	.. .. .	.. .. .	.. .. .	32

CAIRNS AND DISTRICT.

The inspector for this area gives the following particulars for the year ending 30th June, 1934 :—

Number of inspections made	1,021
Number of official calls	70
Number of sanitary depots inspected	2
Number of rubbish tips inspected	2
Number of nuisances	3
Number of towns visited	24

For the City of Cairns several improvements have been made in the sanitary service, and the sanitary area is being extended.

Hotel Sanitation.

Number of hotels inspected	43
Number of objections lodged	13

Of these objections the majority were for repairs necessary.

The following licensing areas were visited:—Cairns, Atherton, Herberton, Innisfail, and Mareeba.

FOOD AND DRUGS.

During the fiscal year 1933-34 the work of this division has been energetically carried out, both in the Brisbane metropolitan area and throughout the State, in the enforcement of the provisions of Part VI. of the Health Acts (Food and Drugs), the Food and Drug Regulations, Milksellers' Regulations, Health (Food Supply) Regulations, Health (Fish Supply) Regulations, Footwear Regulations, and Poisons Regulations. In addition to the routine duties in the Brisbane metropolitan area, officers of the headquarters staff have paid visits of inspection to ninety-eight outside cities and towns.

MILK.

The work of controlling the milk supply of the metropolis and its environs has been systematically pursued by the Department during the year under review, and on the whole the results of the work can be classed as satisfactory. It has entailed a wider range of sampling and inspection than in previous years, owing to the increase in the number of retail distributors caused by unemployed people seeking an avenue of employment, and an increase in the number of producers seeking a larger return for their milk than that obtainable from the low price of cream offering. In this connection it is interesting to compare present times with those of a few years ago. Some six or eight years ago, owing to the unwillingness of country producers to consign their product for sale as milk, due to the good price they were obtaining for cream and the difficulty of quickly transporting their milk to Brisbane, there was always a shortage of milk in the city during the winter months. In many cases this shortage caused supplies to be eked out with water. Now, however, with cream at a much lower price and the provisions of good roads and motor transport for easy carriage of milk to Brisbane, there is always an ample supply of milk in the city, and there is no incentive for the vendor to resort to adulteration when he can readily and cheaply purchase extra supplies. This would appear to be one reason for the lower percentage of adulteration in recent years.

The other reason is undoubtedly the unremitting campaign of the Department against any possible offender. However, with the large number of producers and distributors now supplying the metropolitan area with milk, still greater efforts are required, and this is possible only by an augmented staff and increased expenditure.

The work performed during the year consisted of both bacteriological and chemical sampling at all points of production and distribution, and the inspection of premises and vehicles. Let us consider this work from each angle.

Bacteriological.—There was an increase of 6 per cent. in the number of samples submitted to the Department's laboratory for examination, and it would appear that the numbers have just about reached the limit which it is possible for the present inspectorial staff to obtain and the present staff of the laboratory to analyse.

The samples were obtained from farms, wholesale deliveries, and retailers. The results obtained were not quite so good as those of the previous year; 84.63 per cent. attained the required standard, as compared with 90.67 per cent. in 1932-33. This is attributable to three causes:—

- (a) The concentration of the staff on the worse suppliers with a view to their betterment.
- (b) The incidence of many farmers into the milk supply business untrained as to the requirements of the production of milk for public consumption.
- (c) The fact that many farmers, knowing that the present standards are easy of compliance, are resting on their laurels.

In regard to (c), it is evident that many producers will adopt this attitude until such time as the Department improves the standard by lowering the permissible number of organisms. A large percentage of the samples submitted were examined for *Tubercle bacilli*, and it is pleasing to report that nothing of a serious nature was found.

Chemical.—During the year a record number of samples was obtained by the staff, but the slight percentage of the increase ($2\frac{1}{2}$ per cent.) would indicate that with the present staff and facilities the peak has been reached. This work has been systematically pursued in all portions of Brisbane and its suburbs—Wynnum, Manly, Cribb Island, Sandgate, Redcliffe, and Ipswich and its environs. A total of 1,648 samples were obtained in these districts.

In addition, officers of the headquarters staff obtained, while on tour, 137 samples of milk from the following towns:—Coolangatta, Burleigh, Southport, Gympie, Rosewood, Laidley, Forest Hill, Gatton, Woodford, Kilcoy, Caboolture, Nambour, Bundaberg, Maryborough, Charleville, Childers, Esk, Mitchell, and Roma.

Immediately prior to the Christmas holidays a vigorous sampling and inspection campaign was waged in the seaside districts with a view to checking up as far as possible the supplies of milk to the large number of holiday-makers.

The grand total of 1,785 samples obtained by headquarters officers was submitted to the Government Analyst for analysis, and the quality of the milk is dealt with in his report.

Inspections of Premises, Etc.—When time and opportunity have offered, visits of inspection have been paid to vendors' premises with satisfactory results, much improvement being effected as a result of the visits.

Certified Milk and Milk from a Certified Dairy.—During the past year, as a result of a co-operative effort between the Department of Public Health and the Department of Agriculture and Stock, standards for certified milk and milk from a certified dairy with regulations dealing with the conduct of milking operations, the conditions of premises and vehicles, and methods of distribution, have been gazetted. This marks a notable step forward in the improvement of the milk supply of the State and, within a few months, it should be possible for the public to purchase a grade of milk produced and delivered under the most hygienic of conditions. To safeguard these classes of milk and to guarantee at all times that they are "true to label," this Department will rigidly check the quality of such milk and the methods of distribution and, with the valuable co-operation of the Department of Agriculture and Stock in regard to the health of the herds, the cleanliness of the dairies, and the methods of production, there is no doubt that the desired result will be obtained.

Milk Prosecutions (Headquarters Staff).—Thirty-two prosecutions were instituted during the year by the Department against vendors of milk for various breaches of Part VI. of the Health Acts and of the Milksellers' Regulations, all of which were successful, and penalties amounting to—Fines £129 1s. and costs £36 6s.—were inflicted by Police Magistrates.

Remarks on Prosecutions.—Of the twelve samples of milk adulterated with water, vendors in the Brisbane area supplied nine, and Forest Hill, Nambour, and Charleville one each. The percentage of added water present in these samples ranged from 4.5 to 26.4.

Four persons were prosecuted in connection with samples of milk showing excessive bacteriological counts. The remaining sixteen cases were on account of various breaches of the law by milk-sellers, conduct of business on unregistered premises, use of dirty or improper vehicle, use of unsuitable milk vessels, &c.

BREAD.

During the period under review two special investigations into the working of the bread industry within the metropolitan area were undertaken.

In the first instance remarks made in the Arbitration Court to the effect that a large number of bakehouses were in a filthy condition and conducted by "hobo" bakers were investigated at the instigation of the Minister. In all 111 bakeries were inspected and found generally to be in a satisfactory condition. The reference to "hobo" bakers was not sustained.

The second incident arose from a statement that excessive moisture was to be found in bread baked in Brisbane. As a result of visits to bakehouses, loaves were collected and submitted to the

Government Analyst. In 57 cases the bread was found to conform to the legal standard for moisture content, whilst two loaves contained a slight excess of moisture. The analyst further returned the samples as being well baked and fit for consumption.

OYSTERS.

In consequence of an outbreak of typhoid fever in the Brisbane metropolitan area, in which it was suspected that contaminated oysters sold by an itinerant vendor played a part, a special investigation of oyster banks in the vicinity of Luggage Point sewage outfall was undertaken by the Department's officers.

Specimens of oysters, mud and water, taken from this locality were found, upon examination, to show evidence of contamination indicative of sewage pollution.

As a result of these findings, the co-operation of the Marine Department was sought with a view to having certain banks closed, and such Department has since taken the necessary action to prohibit the taking of oysters from the area under suspicion.

By courtesy, and with the assistance of the Chief Inspector of Fisheries, samples of oysters were later obtained by an officer from parts of Moreton Bay far removed from Luggage Point, and examination of these proved them to be free from contamination and quite wholesome.

With a view to checking the sale by unscrupulous persons of oysters obtained from illegal sources, a strict supervision of the sale of this commodity has been maintained, with the result that a prosecution has now been launched in the case of an itinerant vendor who failed to disclose the source from which his wares had been procured.

FISH SUPPLY.

Supervision over all fish sold at the State Fish Market has continued to be exercised by two inspectors, in addition to which visits of inspection have been made by these officers to retail fish shops and cold stores.

Consignments of fish from overseas have also been under control.

As a result of the work of these officers 58 tons 15 cwt. 3 qr. 14 lb. of fresh fish were condemned and destroyed under the provisions of the Health (Fish Supply) Regulations as unfit for consumption.

In addition the following were condemned and dealt with as aforesaid, viz.:—Crawfish 19, crabs 19, sand crabs 401, turtles 3.

RABBITS.

Inspection of fresh rabbits arriving in Brisbane from country districts of this State and northern New South Wales has also been undertaken, and as a result some 703 pairs were found to be unsound or unfit for consumption and were dealt with in a manner to the satisfaction of our officer.

SPIRITUOUS LIQUORS.

Spirits have been regularly tested at hotels, clubs, show grounds, racecourses, and warehouses. As nearly all whisky, brandy, and rum are now reduced for the hotelkeeper by the merchant a great deal of the haphazard methods of the past has been eliminated, resulting in a decided advantage to the consumer.

Special attention has been given during the year to the condition of sinks in hotel bars and to the washing of glasses. Although the quality of spirits dispensed was generally satisfactory, it was found necessary by the Department to take legal proceedings against hotelkeepers in various parts of the State in respect of nine samples submitted to the Government Analyst. Convictions were obtained in connection with the sale of whisky, brandy, rum, and schnapps adulterated with added water, and penalties inflicted were—Fines £31 10s. and costs £12 3s. The average percentage of added water in these cases was 13.4.

UN SOUND FOOD.

Inspections by officers of the headquarters staff during the period under review resulted in the destruction of 15 tons 3 cwt. 0 qr. 12 lb. of contaminated, deteriorated, or unsound food and drugs.

FRUIT AND VEGETABLES.

The continued use of poisonous insecticides by fruit and vegetable growers and the occasional marketing of these commodities contaminated with arsenic and lead has entailed constant supervision on the part of inspectors. Fruit heavily contaminated with arsenic continues to arrive on the local market from Victoria, and during the year it was found necessary to order the treatment of 2,469 cases of apples and pears so contaminated before sale in order to render them safe for consumption. In addition, 49 cases of contaminated apples from the same State, and which the local agent refused to handle, were condemned and destroyed by the officer engaged in this work.

In two instances Queensland-grown bananas were discovered to be contaminated with arsenic, and the analyst reported in one of these cases that the poison had penetrated to the edible portion of the fruit. As a result 196 dozen bananas were condemned and destroyed as unfit for food.

Owing to lead arsenate adhering to such vegetables offered for sale at the Brisbane Markets, 52½ dozen cabbages were condemned and destroyed, and in this connection five farmers concerned were prosecuted. Each defendant was convicted and fined £10 and 6s. costs. At one farm the use of arsenic on grown cabbages was so excessive as to necessitate the destruction of the entire crop.

The foliage of carrots that had been heavily sprayed with arsenate of lead came under notice during the year, and whilst the edible portion of the carrots was not affected to any extent, the element of risk to the person handling such contaminated vegetables is worthy of consideration.

LEAD IN PAINT.

So far as the limited staff available has permitted, samples of paint have been obtained from buildings and fences, and in a number of instances found to contain soluble lead in excess quantities. Two prosecutions were instituted against offenders for breaches of section 116 of the Health Acts and a conviction in each case obtained, fines and costs totalling £3 15s. Stocks of paint have been examined from time to time with a view to ensuring that these conform to labelling requirements of the Health Acts.

DANGEROUS TOYS.

An examination was made of imported toys, including the rubber and celluloid varieties. In several instances the coloured pigments on these toys contained lead, and the articles were promptly withdrawn from sale and destroyed.

POISONS.

The provisions of "The Poisons Regulations of 1924" have been enforced throughout the State. Special attention was paid to the sale and use of dangerous drugs, and in this connection wholesale druggists and retail chemists have received visits, and where found necessary instructions given for the proper recording of all stocks and sales of such drugs. Amended Poisons Regulations have now been framed and submitted, and upon gazettal of these it is anticipated that the Department will have fuller control over stocks and sales of narcotics.

During the past year the Department successfully proceeded against seven persons for breaches of the Poisons Regulations. These breaches included selling poison without a license, packing poison in a food container, selling arsenic in paper bags, &c. The Police Magistrates dealing with the cases inflicted fines totalling £23 and costs £4 10s.

FOOD AND DRUG SAMPLING.

A total of 6,314 samples of food and drugs were obtained and submitted to the Government Chemical Laboratory during the year. Of this number 2,447 samples were procured officially for legal purposes, and 3,867 were unofficial samples collected for tentative analysis.

Sampling (for Bacteriological Examination).—Milk: Eight hundred and ninety-eight samples of fresh milk were submitted to the Laboratory of Microbiology for examination.

Specimens other than Milk: Two hundred and eighty-nine samples, comprising bottles (milk), bottle caps (milk), bread, disinfectants, egg pulp, eucalyptus, fish patty, flour, frozen dainties, garden spray, heading, ice cream, ices, mud, oysters, rat poison, shaving brushes, sheep dip, soap, tar, tree-oils, and water were also submitted to the Laboratory.

MISCELLANEOUS PROSECUTIONS.

Nineteen miscellaneous prosecutions were instituted by the Department, which resulted in fines totalling £44 10s. and costs £8 1s. These cases were in respect to short-weight bread, sale of unsound fish and vegetables, exposure of food to contamination, sale of unlabelled food, use of dirty and unsuitable food premises, use of unclean vehicles, obstruction of an officer, &c.

CENTRES VISITED.

The following is a list of places visited by inspectors attached to headquarters:—Adavale, Amby, Augathella, Beerwah, Benarkin, Blackbutt, Biggenden, Bilinga, Boonah, Burleigh, Byrnestown, Caboolture, Caloundra, Charleville, Childers, Chinchilla, Coolangatta, Cooran, Cooroy, Cordalba, Crawford, Cunnamulla, Currumbin, Dallarnil, Degilbo, Eidsvold, Elanora, Esk, Eumundi, Forest Hill, Gatton, Gayndah, Goomeri, Gooroolba, Gunalda, Gundiah, Gynpië, Harrisville, Howard, Ideraway, Kalbar, Kilcoy, Kilkivan, Kingaroy, Kumbia, Laidley, Landsborough, Linville, Lowood, Mareeba, Maroochydore, Maryborough, Miles, Mitchell, Mooloolah, Monto, Moore, Morven, Mount Alford, Muckadilla, Mulgeldie, Mundubbera, Mungallala, Mungar Junction, Murgon, Nambour, Nanango, Palm Beach, Palmwoods, Peak Crossing, Pomona, Preston, Quilpie, Roadvale, Roma, Rosewood,

Southport, Taabinga Village, Taroom, Tewantin, Thargomindah, Theebine, Tiaro, Tingoor, Toogoolawah, Torbanlea, Tugun, Wallumbilla, Wandoan, Wondai, Woodford, Woolooga, Woombye, Wooroolin, Wyandra, Yandina, Yarraman, Yeulba.

FOOTWEAR.

Inspection of boot and shoe stocks indicated that manufacturers had, in the main, complied with the requirements of section 117 of the Health Acts and Regulations thereunder. In a few instances the absence of the maker's name or registered brand on these articles was observed and correction of this omission was promptly secured.

TOBACCO.

The sampling of tobacco leaf, which has been carried out during the year at established depots throughout the State, has taxed to the limit the staff available for this work.

A total of 2,664 samples of leaf and manufactured tobacco were obtained and submitted for analysis. As a result of examination of these samples, it was found that considerably less lead arsenate had been used by growers than was the case in the previous year.

The following summary shows the details of the samples of tobacco examined:—

OFFICIAL SAMPLES (LEAF).

No. of Samples.	Lead Arsenate. Nil.	Lead Arsenate. Under 2 grains per lb.	Lead Arsenate. Over 2 grains per lb.	Greatest quantity of Lead Arsenate found.
2,248	1,070	1,120	58	10·0 grains per lb.

UNOFFICIAL SAMPLES.

Nature of Sample.	Number.	Lead Arsenate Nil.	Lead Arsenate Under 2 grains per lb.	Lead Arsenate Over 2 grains per lb.	Greatest quantity of Lead Arsenate found.
Local leaf	138	28	90	20	..
*Local prepared tobacco	231	2	72	157	17·0 grains per lb.
Imported prepared tobacco ..	46	10	36	..	..
	415	40	198	177	17·0 grains ger lb.

* In addition, one sample of potassium chlorate cigarettes was examined.

TOOWOOMBA.

The officer in charge of the Department's sub-office at Toowoomba reports that as far as possible his district has received the usual routine attention during the year under review. Apart from his work in the City of Toowoomba he has paid visits of inspection on food and drugs work to the following outside places, viz.:—Texas, Jandowae, Greenmount, Clifton, Warwick, Stanthorpe, Inglewood, Ballandean, Glen Aplin, Wallangarra, Tannymorel, Killarney, Emu Vale, Yangan, Hendon, Allora, Nobby, Cambooya, Tara, Dalby, Bell, Oakey, Haden, Goombungee, Meringandan, Crow's Nest, Pechey, Hampton, and Cabarlah.

Milk.—One hundred and sixty-nine official samples of milk were collected and submitted for chemical analysis. Of this number 21 were reported by the analyst as failing to conform to the prescribed standard in that they were deficient in fat content, and the vendors of these samples were directed in writing to secure an improvement in the quality of milk handled by them. Two samples of milk were found to be adulterated with added water, and legal proceedings are pending in regard thereto.

Spirits.—Liquor testing at hotels has received attention, and in most cases spirits were found to conform to legal standards. It was, however, found necessary to institute proceedings in respect to five cases embracing whisky, brandy, and rum found adulterated with added water. A conviction was obtained in each case, and fines totalling £10 and £6 15s. costs secured.

Unsound Foods.—Our officer in Toowoomba certified to the destruction of 1 ton 8 cwt. 1 qr. 22 lb. of unsound and deteriorated foodstuffs, comprising bacon, confectionery, dates, fish (fresh and canned), fruit (fresh and dried), jam, milk (canned), meat (canned), and vegetables.

Poisons.—The provisions of “The Poisons Regulations of 1924” were strictly enforced, and minor breaches brought under notice of offenders.

ROCKHAMPTON.

The Department’s Inspector stationed at Rockhampton has continued to exercise supervision over the manufacture and handling of food and drugs in this centre, and, in addition to his duties in the city area, visited various outside towns.

Milk.—The milk supply of Rockhampton received special attention and a total of 93 samples were secured for analysis. As a result of the examination of these, five were found to be deficient in fat content and three samples were reported by the analyst to be adulterated with added water, the percentages being 10.9, 7.6, and 1.8 respectively. Legal proceedings have been instituted against vendors of the two former samples.

Unlicenssd Vendors.—For selling milk without the necessary license, three persons were prosecuted and a conviction obtained in each case. Each defendant was fined 15s. with 6s. costs—fines and costs totalling £3 3s. In addition, proceedings were taken against a number of milksellers for various breaches of Regulations. These had not been finalised at the close of the year under review.

Liquor.—The testing of spirits has been carried out at hotels, both in the city and outside areas, and in one instance it was found necessary to proceed against a hotelkeeper for having in his possession for sale whisky and rum adulterated with added water to the extent of 12.3 and 25.3 per cent. respectively. Fines totalling £15 and costs £2 14s. were imposed by the Police Magistrate.

Unsound Foods.—Food stocks received regular overhaul with the result that our officer issued certificates covering some 3 cwt. 0 qr. 2 lb. of unsound foodstuffs of various descriptions which were disposed of to his satisfaction.

Food Poisoning.—An outbreak of food poisoning at Monto was specially investigated. Owing to the delay in receiving the necessary information it was not possible to secure samples of the food actually responsible. Inquiries elicited the fact that in each instance the sufferer had eaten sausages obtained from the same source.

MACKAY.

The officer in charge of Mackay sub-office, in addition to his food and drug work in that town, has paid visits of inspection to the following outside places, viz.:—Dundulah, Erakala, Mielere, Hillend, Greenmount, Beaconsfield, Slade Point, Dumbleton, Koumala, Carmila, Sarina, Baker’s Creek, Palmyra, Pleystowe, Marian, Mirani, Gargett, Pinnacle, Finch Hatton, Netherdale, Eungella, Proserpine, Bowen, Collinsville, Merinda, Police Camp, Glenella, Farleigh, Wundaroo, The Leap, Kuttapul, Mount Pelion, Koliyo, Calen, Pindi Pindi, Yalbaroo, Homebush, Eton, Range, Retreat, Nebo, Walkerston.

Unsound Food.—During the course of his inspections the Mackay officer has issued certificates covering 14 tons 18 cwt. 2 qr. 1 lb. of deteriorated and unsound foodstuffs destroyed under his supervision as unfit for human consumption.

Samples.—Sixty-three samples of milk and one sample of whisky have been submitted for chemical analysis during the year. Four milk samples were adulterated with added water and ten were deficient in the percentage of milk-fat required to be present. The watered samples came from Mackay, Proserpine, and Collinsville.

Prosecutions.—Two milksellers have been prosecuted during the period under review for having sold adulterated milk, and convictions were obtained in each instance. Penalties totalling fines £16 and costs £2 14s., were imposed. One hotelkeeper was proceeded against for selling adulterated whisky and was convicted and fined £2 and £1 7s. costs.

TOWNSVILLE.

The inspector in charge at Townsville reports that constant attention has been given during the year to the milk supply of that city, and apart from the sampling of milk, special attention was given to the condition of milksellers’ vehicles, milk cans, and measures. In this connection sixty-two notices were served on individual vendors requiring the provision of seamless and lidded milk vessels, covered containers to carry measures, provision of properly constructed covered vehicles, the cleansing and repainting of vehicles, &c. The officer adds that as a result of his action a decided improvement in the general conduct of milk delivery was obtained.

Milk Samples.—Of ninety-eight milk samples collected within the city area, seventy-six conformed to the legal standard, nineteen were deficient in the required percentage of fat, whilst three were adulterated with added water.

Prosecutions.—For having sold adulterated milk three persons were proceeded against, and fines totalling £25 10s. and costs £6 3s. were imposed by the court. A vendor was convicted and fined £1 and costs 6s. for having sold milk without a license, and for the use of a dirty vehicle the same person was fined £2 and 6s. costs.

Food Samples.—In addition to milk, twenty-one samples of foodstuffs were submitted for analysis during the year, viz.:—Apples 7, pears 5, celery 2, rum 2, and one sample each of honey, flour, chutney, cordial, cabbage.

Unsound Food.—Certificates of condemnation were issued for 1 ton 12 cwt. 1 qr. 12 lb. of foodstuffs of various kinds found to be unsound.

Fruit and Vegetables.—Inspection of consignments of fruit arriving by steamer has been regularly performed by the Townsville officer, and resulted in 265 cases of apples and 63 cases of pears being found so contaminated with arsenic as to render necessary the treatment of the fruit under his supervision in order to make it safe for consumption. Three crates of cauliflowers and four and a-half dozen cabbages were seized and destroyed by the inspector owing to their being dangerously contaminated with lead arsenate.

Tobacco.—Five auction sales of tobacco leaf were held in Townsville during the year, and 244 samples of this leaf were examined, 4 of which were so contaminated with arsenic and lead as to render the leaf unsuitable for manufacture into smoking tobacco.

CAIRNS.

During the year under review the Department's officer has carried out duties under Part VI. of the Health Acts in the City of Cairns, and also in the outside towns of his district. Much of the inspector's time was necessarily occupied in the sampling of tobacco leaf offered for sale in Cairns and the various tobacco-growing centres, and in this connection it was found necessary to station an analyst and an additional inspector at Mareeba for some weeks with a view to relieving the position so far as the large quantity of leaf handled at that centre was concerned.

Milk Supply.—Eight official samples of milk submitted for analysis, with the exception of one, were found to conform to the legal standard. The sample that failed was deficient in the proportion of fat required to be present.

Unsound Foods.—A total quantity of 1 ton 3 cwt. 2 qr. 19 lb. of deteriorated and unsound food of various kinds was withdrawn from sale and destroyed during the year.

Fruit and Vegetables.—Some 46 samples of apples and pears secured from shipments from Southern States were forwarded for analysis, and the majority of these were found to be contaminated with excessive quantities of an arsenical spray. The fruit concerned was permitted to go into consumption after satisfactory treatment to remove the poison had been carried out under the supervision of the inspector. Two cabbage samples were examined, and as a result one local crop of this vegetable was found to be so contaminated with arsenic as to render its destruction necessary.

Poison in a Food Container.—Poison packed in a food container was responsible for the accidental death of a person who had consumed some of it in the belief that the substance was beer. In respect of this breach of the Poisons Regulations the manager of a country store was proceeded against for having sold a poison (cattle dip) in a beer bottle, and a fine of £30 and 6s. costs secured, whilst the firm employing him was convicted and fined £10 and £2 8s. costs for having sold the poison without a license.

LABORATORY OF MICROBIOLOGY.

The following are the particulars of the work carried out in the Microbiological Laboratory for the year ending 30th June, 1934. The activities for the year show a marked increase on those of the previous year.

The total number of specimens received numbered 75,231, an increase of 14,195 on those of last year. This increase covers rodents for B. Pestis, Cultures for C. Diphtheriae, Bloods for Wassermann Reaction, Smears for Gonococci, Bloods, Urine and Faeces for Typhosus, &c. Especially noticeable is the increase in the number of rodents for B. Pestis and B. Leprae.

All the sources from which specimens have been received in the previous year are observed in the present with increased numbers—notably the Brisbane City Council.

Plague.—The number of rodents destroyed during the year shows an increase of 13,763 compared with last year. The first line of defence in the detection of plague is undoubtedly the continual examination of rodents.

A further reason for the surveyance of these specimens is the prevalence at the present time of Weil's disease in the North. The *Leptospira icterohæmorrhagiae*—the cause of the disease—may be found in all species of rats.

Thirty-seven thousand one hundred and seven rodents were examined, but in none of the specimens was any evidence of plague found.

Rats received were classified as follows:—

Rattus Rattus Norvegicus	..	..	..	..	..	..	24,371
Rattus Rattus Rattus	..	..	..	..	..	..	1,941
Rattus Rattus Alexandrinus	..	..	..	..	..	..	4,011
Hydromys Leucogaster	..	..	..	..	..	..	27
Unclassified (very young rats)	..	..	..	..	..	..	4,634
Mus Musculus	..	..	..	..	..	..	2,123

Twenty-one (21) rats showed the presence of numerous acid fast bacilli (Rat Leprosy).

Smears from rats in Northern towns were submitted for examination, but in none of them was the plague bacillus present.

Diphtheria.—The total number of cultures submitted for the year ending the 30th June, 1934, was 16,730; of these 13.4 per cent. contained the *Corynebacterium diphtherie*, whilst for the previous year the number examined totalled 16,146, of which 17.2 per cent. showed the bacillus. Virulence tests performed during the year show a considerable increase, numbering 382 as against 236 for the previous year. The percentage virulent was 25.6.

Venereal Disease.—There was an increased number of specimens submitted for examination. Of the Wassermann Reactions, 1,109 were positive. This is 40.8 per cent, as compared with 48.9 per cent. last year.

Of the Gonorrhœal Complement Fixation tests made, 128 were positive, or 27.7 per cent.

Of the number of smears examined for Gonococci, 696 were positive.

Of the specimens submitted for Spirochæta Pallida, the number found positive was 45.7 per cent. of the total.

Typhoid.—The number of bloods examined by the agglutination method for evidence of the presence of the typhoid and para-typhoid fevers increased, 9.6 per cent. showing a positive reaction. The number of urines and fæces shows a marked increase.

Tuberculosis.—There were 285 specimens submitted for examination for tubercle bacilli. The percentage showing the bacillus in sputum was 31.9, compared with 29.7 last year.

Leprosy.—The specimens of sera submitted for the bacillus lepræ numbered 867, as against 724 last year. The majority of these were from persons suffering from the disease—patients of the Lazaret.

Autogenous Vaccines.—The number of these vaccines prepared during the year was 48, compared with 79 last year. The amount of antityphoid (T.A.B.) vaccine supplied was 1,702 c.c.s.

Foods.—Of the milks, ice creams, and frozen dainties examined for bacterial count, the figures are 1,115 for 1934, compared with 1,015 for 1933, an increase of 100.

Identification.—There was an increased number of parasites submitted for identification from the Brisbane City Council. Fleas received were classified as follows:—

Pulex Irritans	..	..	..	..	..	..	..	..	5
Leptopsylla Musculi	..	..	..	..	..	..	..	..	60
Xenopsylla Cheopis	..	..	..	..	..	..	..	..	56
Ctenocephalus Felis	..	..	..	..	..	..	..	..	3

Culture Media.—Ten thousand two hundred and sixty-eight swabs and cultures were forwarded to the Commonwealth Health Laboratories at Cairns, Townsville, Rockhampton, and Toowoomba.

Legal Work.—Exhibits submitted to the Laboratory by the Police Department show a marked increase.

Miscellaneous.—The number of miscellaneous specimens shows an increase in some instances.

SPECIMENS RECEIVED IN THE LABORATORY DURING THE YEAR, 1ST JULY, 1933, TO 30TH JUNE, 1934.

Examination.	Health and Hospitals.	Private Practitioners.	Total.	Examination.	Health and Hospitals.	Private Practitioners.	Total.
Diphtheria—				Bacterial Diagnosis—			
Cultures	14,037	2,693	16,730	Smears from ulcer ..	2	..	2
Direct smears	1	11	12	Pus from leg	1	..	1
Virulence tests	336	46	382	Fluid from wrist	1	..	1
Gonorrhoea—				Fluid	2	1	3
Smears	7,564	549	8,113	C.S. fluid .. ..	..	1	1
Bloods	423	38	461	Pleural fluid	1	..	1
Syphilis—				Urine	6	5	11
Wassermann reaction ..	2,186	528	2,714	Sputa .. ..	..	3	3
Spirochaetes pallida ..	33	2	35	Pus	1	1	2
Kline tests	9	4	13	Smear	1	3	4
Chancroid—				Culture .. ..	..	2	2
Smears .. ..	..	2	2	Bread	2	..	2
Tuberculosis (Human)—				Milk	1	..	1
Sputa	140	145	285	Flour	2	..	2
Urine	1	3	4	Fish	1	..	1
Pleural effusion	1	1	2	Oysters	31	..	31
Smear from throat .. ..	..	1	1				
Tuberculosis (Bovine)—				Examinations—			
Milks	224	..	224	Urine	2	2	4
Leprosy—				Urine (Pus) .. ..	..	6	6
Smears (human)	780	87	867	Urine (sugar)	1	2	3
Smears (rat)	21	..	21	Urine (albumen)	7	2	9
Typhoid and Para-typhoid				Urine (blood)	5	..	5
Fever—				Urine (casts)	13	6	19
Bloods (agglutination) ..	45	49	94	Urine (deposits) .. ..	..	5	5
Urine	120	38	158	Urine (cells)	3	1	4
Faeces	126	47	173	Urine (urea concentra-	7	..	7
Blood cultures .. ..	..	2	2	tion)			
Milk	3	..	3	Chest fluid (deposits) ..	..	1	1
Oysters	1	..	1	C.S. fluid (deposits) ..	1	..	1
Typhus—				Chip of fence (blood) ..	1	..	1
Serum tests (Weil-Felix) ..	..	3	3	Filter	1	..	1
Vincent's Angina—				Sterility—			
Smears	1	5	6	Bottles	3	..	3
Cultures .. ..	..	1	1	Efficiency—			
Anchylostomia—				Disinfectants	2	..	2
Faeces	163	25	188	Sanito block	1	..	1
Soil	1	..	1	Dental chlorize	1	..	1
Dysentery—				Ringworm—			
Faeces .. ..	..	2	2	Hair .. ..	..	1	1
Malaria—				Bacterial Count—			
Blood .. ..	..	2	2	Milk	896	..	896
Scarlet Fever—				Ice cream	8	..	8
Cultures	1	1	2	Ice	1	..	1
Filaria—				Frozen dainties	210	..	210
Blood .. ..	..	1	1	Egg pulp	2	..	2
Tetanus—				B. Coli—			
Roll of cotton wool ..	1	..	1	Waters	40	..	40
Anthrax—				Blood—			
Shaving brushes	9	..	9	Differential count	5	10	15
Food Poisoning—				Full count	2	2	4
Faeces	8	..	8	Urea .. ..	..	1	1
Foodstuffs	9	..	9	Pernicious anaemia .. ..	..	5	5
Vomit	1	..	1	Leucopenia	1	..	1
Identification—				Basophilia	6	3	9
Worms .. ..	..	3	3	Anaemia	1	1	2
Parasites	215	..	215	Medico Legal—			
Co-efficiency—				Clothing (seminal stains	54	..	54
Disinfectants	13	..	13	and blood)			
Soap	1	..	1	Bed quilt (seminal stains	1	..	1
Vaccines—				and blood)			
Cultures	10	21	31	Smears (Gonococci) ..	3	..	3
Sputa	2	2	4	Towel (blood)	1	..	1
Faeces	1	6	7	Animal Inoculation—			
Urine	1	2	3	Virulence (K.L.B.) ..	382	..	382
Swabs .. ..	..	3	3	Milks (T.B.)	54	..	54
				Urine (T.B.) .. ..	..	1	1
				Totals	28,255	4,388	32,643

Examination of Rats and Mice for Plague.

	Rats.	Mice.	Total.
Rodents received for examination from Brisbane City Council	34,984	2,123	37,107
Rodents destroyed by Brisbane City Council (not examined)	6,483	878	4,361

Rats Smears received during the Year.

Ipswich	1,341
Maryborough	1,216
Bundaberg	1,138
Gympie	713
Wynnum	525
Mackay	350
Sandgate	191
Bulimba	7
	<hr/> 5,481
Grand Total	<hr/> 75,231

Cultures and swabs supplied to the Commonwealth Laboratories were as follows:

Cairns	3,168
Rockhampton	2,016
Toowoomba	2,420
Townsville	2,664
	<hr/> 10,268
Requisitions supplied during the year	696

AMOUNT OF CULTURE MEDIA PREPARED IN THE LABORATORY DURING THE YEAR 1933-34

Medium Prepared.	Number of Tubes, &c.
Serum cultures—	
Ox serum slopes	30,674
Human serum slopes	47
Human serum plates	98
	<hr/> 30,819
Ordinary broth—	
Tubes	645
Tubes (disinfectant)	214
Bottles	14
	<hr/> 873
Ordinary Agar—	
Small slopes	221
Large slopes	48
*Deep	37
	<hr/> 306
Sugars—	
Glucose	122
Lactose	426
Maltose	55
Mannite	53
Dulcite	80
Lævulose	49
Inulin	37
Sorbite	35
Adonite	83
Glycerine	57
Gelactose	30
Erythrite	30
Salacine	54
Dextrin	29
Saccharose	70
	<hr/> 1,210
Treble Lactose (tubes)	87
Wilson's Medium for B. Typhosus (plates)	187
Endo's Medium for B. Typhosus (plates)	642
Endo's Medium for B. Coli (plates)	228
Methyl Red Medium (tubes)	80
Brilliant Green Enrichment Medium (tubes)	298
Peptone Water for Indol (tubes)	82
Medium for V.P. Reaction (tubes)	96
Litmus Milk (tubes)	54
Lemco Broth (litres)	24
Acid Phosphate Solution (tubes)	90
Blood Agar (plates)	17
Grand Total	<hr/> 35,093

* In addition to the figures quoted under Ordinary Agar there were made 25 litres of Agar afterwards used for various purposes.

ALTERATIONS IN STAFF.

The nurses attached to the Hookworm Campaign were transferred from this Department to the Department of Public Instruction from the 1st July, 1933.

Mr. A. W. Lowe, of the Clerical Staff, was seconded to the Inspectorial Branch for a period of four months from 12th October, 1933, and detailed for special duties in connection with the Tobacco industry in the Mareeba District.

Mr. C. J. Murray (cadet), Inspectorial Branch, was appointed as Assistant to Inspectors from the 5th December, 1933.

Mr. Stanley Thompson was appointed Microscopist, Hookworm Campaign, on 6th December, 1933, and stationed with headquarters at Innisfail.

Nurse Rose A. Cooper resigned from the staff of the Venereal Isolation Hospital, Brisbane, on the 8th December, 1933. Nurse Gladys E. Tinney resigned from the Venereal Isolation Hospital, Brisbane, on the 3rd June, 1934. Nurse Eveline Bow was appointed Sister at the Venereal Isolation Hospital from the 23rd May, 1934. Nurse Eileen McCarthy was appointed Acting Sister on the 3rd May, 1934.

Mr. L. E. Mellish, Secretary of the Department, retired from the service on the 30th June, 1934.

REGULATIONS, ETC.

The Venereal Diseases Regulations were reapplied for a period of five years in the *Government Gazette* of the 7th September, 1933.

The Camp Regulations were gazetted in force for a further period of three years on the 24th February, 1934.

The Scarlet Fever and Typhoid Fever Regulations were gazetted in force for a further period of five years on the 24th February, 1934.

The Food and Drug Regulations, 1928, were amended on the 16th May, 1934, by the insertion of provisions dealing with "Certified Milk" and "Milk from Certified Dairies," and the licensing of persons selling such produce.

The Diphtheria, Typhoid Fever, Scarlet Fever, Hookworm, Plague Prevention, Camp, and the Sanitary Conveniences and Nightsoil Disposal Regulations were applied to the Dawson Valley Irrigation Area constituted by "*The Irrigation Acts Amendment Act of 1933*," and also the provisions of Part VIII. of "*The Health Acts, 1900 to 1931*," relating to Lying-in Hospitals were applied to such area.

HEALTH ADMINISTRATION, BRISBANE CITY COUNCIL.

As directed by Order of His Excellency the Governor in Council, I conducted an inquiry into the health administration of the Brisbane City Council on the 27th June, 1933, and furnished my report to the Honourable the Home Secretary on the 2nd August, 1933.

HEALTH INSPECTORS.

Arrangements were made for a students' course, in connection with the Examination for the Sanitary Inspector's Certificate, to commence on the 2nd July, 1934, and to cover a period of twelve months. Provision was made for attendance at lectures in Brisbane or the taking of a postal course. Sixteen metropolitan and thirty-three country students submitted their names for enrolment.

ADMINISTRATION.

The general health condition of the State remained satisfactory during the year under review, and Local Authorities generally gave all necessary support in carrying out the requirements of the Health Acts and Regulations.

My thanks are particularly due to the officers of the Commonwealth Department of Health, Crown Law Department, the Government Analyst, and Police Officers throughout the State for their co-operation and assistance on all occasions.

In conclusion, I desire to express my regret and the regret of the staff generally at the retirement of Mr. L. E. Mellish after forty-eight years of meritorious service, of which over twenty-six years were passed as Secretary of the Department of Public Health.

JOHN COFFEY, F.R.C.S., D.P.H.,

Commissioner of Public Health.

Appendix A.
HOOKWORM CAMPAIGN.
ANNUAL REPORT, 1934.

GENERAL.

The year ending 30th June, 1934, has witnessed extended activities in the field of Hookworm Control.

At the commencement of July, 1933, the staff comprised Two Residential Nurses at Innisfail, one at Ingham, and one at Cairns. In addition, Inspector Kennedy in the Innisfail area and Inspector Real at Ingham were responsible for activities in regard to sanitation.

In December, 1933, reorganisation of the work resulted in the appointment of the Senior Resident Nurse (C. A. Vincent) at Innisfail and Mr. S. Thompson as Microscopist. Early in the present year two new appointments were made to the staff—Nurses Waterhouse and Underwood. During the year the then resident nurse at Cairns resigned to take another position.

Tully area, previously worked in conjunction with Innisfail, is now in charge of a Resident Nurse, with headquarters in Tully.

The present disposition of officers is as follows:—Innisfail: Microscopist, Senior Resident Nurse, and Nurse Underwood. Ingham: Nurse L. Waterhouse. Cairns: Nurses J. Bacon and A. Leeper. Tully: Nurse B. L. Gibbon. Innisfail and Tully: Inspector J. M. Kennedy. Cairns: Inspector Real.

Innisfail comprises the following sub-areas:—Innisfail Town, Mourilyan, South Johnstone, Daradgee, Goondi, and Babinda.

A slight decrease of infection has been noticed in all the above, with the exception of Innisfail Town and Babinda, where marked increases in the infection rates are shown. The increase in the first-named sub-area is partly due to the influx of school-going hosts from adjacent sub-areas.

In this connection it is worthy of note that in the sub-areas showing a decrease the sanitation has been completed, and where an increase is noted (Innisfail and Babinda) the sanitation in the former is not yet completed, and in the latter the activities of the inspector has just commenced. The homes of all hosts in the completed area have been visited, and the sanitation brought up to the safe standard required.

Treatments have been delivered at schools as per programme, but owing to the phenomenal rainfall over the last twelve months, it has been impossible for much follow-up work to be carried out by the Resident Nurses.

Ingham includes Ingham Town, Macknade, Halifax, Victoria, Trebonne, Stone River, Hawkin's Creek, and Bambaroo sub-areas.

This area was very highly infected during previous surveys, both school-going and adult hosts. From the available figures a general improvement can be noted, but infection exists in all sub-areas, with Halifax showing an increase.

The sanitation in Ingham area has been completed by Inspector Real. Weather conditions have operated against follow-up work in this area, together with the difficulty of transport in the country districts.

Cairns includes all districts under Hookworm Control north of Babinda. A definite increase of infection among school-going hosts in Cairns City seems to be indicated, with special reference to Parramatta State School. As the school survey in this area is not yet complete, comprehensive figures are lacking.

Follow-up work has been carried out throughout this area, and pronounced hostility on the part of many parents has been shown.

Sanitation in the infected Cairns City area and the section north of Parramatta is being attended to by Inspector Real.

Tully district was opened as a separate centre on 30th June, 1934. It was not possible to carry out much work in this section during the year under review, owing to weather conditions. Recent figures suggests an increased infection rate, due no doubt to the impossibility of carrying out the necessary follow-up work during the year.

Tables giving figures of each area, with suitable headings to indicate the nature of the work done, are attached.

Brief visits were made by the Microscopist to Cairns and Ingham as required and as opportunity offered, to arrange official matters in connection with Hookworm Control.

S. THOMPSON, Microscopist in Charge.

HOOKWORM CAMPAIGN.
ENDEMIC AREA UNDER RESIDENTIAL CONTROL.

Name.	Census.	SPECIMENS.					TREATMENT.				
		Received.	Exam'd.	Re-exam'd.	POSITIVE.		Notices.	Delivered.	Posted.	E. C'ts.	Cured.
					H. W.	Others.					
Innisfail Area—											
Schools	3,503	3,817	3,722	140	221	481	468	129	47	221	91
Cairns Area—											
Schools	2,820	3,283	2,943	255	298	234	435	271	18	298	128
Ingham Area—											
Schools	1,840	1,546	1,451	34	53	124	141	20	..	53	13
School Total ..	8,163	8,646	8,116	429	572	839	1,044	420	65	572	232
Other Hosts in—											
Innisfail .. ..	..	96	..	96	49	5	6	42	..	49	47
Ingham .. ..	..	63	..	63	22	4	22	40	..	22	41
Other Hosts Total	..	159	..	159	71	9	28	82	..	71	88
Miscellaneous—											
Innisfail Area ..	626	755	620	135	183	72	48	117	27	183	3
Cairns Area ..	241	278	215	63	67	16	68	42	25	67	15
Ingham Area ..	153	201	201	..	45	32	7	13	..	44	..
Miscellaneous Total	1,020	1,234	1,036	198	295	120	123	172	52	294	18
All Areas—											
Innisfail Area ..	4,129	4,668	4,342	371	453	558	522	288	74	453	141
Cairns Area ..	3,061	3,561	3,158	318	365	250	503	313	43	365	143
Ingham Area ..	1,993	1,810	1,652	97	120	160	170	73	..	119	54
Grand Total ..	9,183	10,039	9,152	786	938	968	1,195	674	117	937	338

Appendix B.

GOVERNMENT CHEMICAL LABORATORY.

The Commissioner of Public Health,
Brisbane.

SIR,—I have the honour, in accordance with section 31 of “*The Health Acts, 1900 to 1931*,” to submit the following report of work done in the Government Chemical Laboratory for the Department of Public Health during the year ending 30th June, 1934:—

The number of samples examined during this period was 6,314, an increase of 1,586 samples on the record number examined last year. The following table is a summary of the work done:—

TABLE I.

Nature of Sample.								Number of Samples.	Passed.	Failed.
Beverages and cordials	..	..	..	..	..	..	..	76	40	36
Bread	..	..	..	..	..	..	..	61	59	2
Disinfectants	..	..	..	..	..	..	..	50	38	12
Drugs and medicines	..	..	..	..	..	..	..	59	40	19
Essences	..	..	..	..	..	..	..	52	29	23
Fish (tinned)	..	..	..	..	..	..	..	38	12	26
Fruit and fruit juices	..	..	..	..	..	..	..	251	59	192
Jam and jelly crystals	..	..	..	..	..	..	..	28	7	21
Margarine	..	..	..	..	..	..	..	11	10	1
Meat (raw)	..	..	..	..	..	..	..	33	10	23
Milk (fresh)	..	..	..	..	..	..	..	2,409	2,031	378
Paint	..	..	..	..	..	..	..	91	24	67
Spirituous liquors	..	..	..	..	..	..	..	66	34	32
Tobacco	..	..	..	..	..	..	..	2,664	2,429	235
Toilet preparations	..	..	..	..	..	..	..	23	7	16
Toys (rubber)	..	..	..	..	..	..	..	30	20	10
Vegetables (fresh)	..	..	..	..	..	..	..	34	15	19
Water	..	..	..	..	..	..	..	30	23	7
Miscellaneous	..	..	..	..	..	..	..	308	245	63
								6,314	5,132	1,182

In the case of some of the disinfectants and most of the drugs, medicines, and toilet preparations, the samples were condemned for mislabelling; the contents of the package did not justify the claims on the label.

Of the total number of samples submitted, 2,447 were legal samples taken by inspectors in accordance with the provisions of the Health Acts. Table II. shows the results from these samples:—

TABLE II.

Nature of Sample.								Number of Samples.	Passed.	Failed.
Fruit (fresh)	..	..	..	..	..	..	..	127	34	93
Meat (sausage and minced)	..	..	..	..	..	..	..	20	8	12
Milk	..	..	..	..	..	..	..	2,259	1,908	347 (+ 4 sour)
Spirituous liquors	..	..	..	..	..	..	..	30	2	28
Summer beverages	..	..	..	..	..	..	..	2	..	2
Miscellaneous	..	..	..	..	..	..	..	9	4	5
								2,447	1,956	491

The following table shows the details of the legal samples of milk :—

TABLE III.

Place.	Number of Samples.	Passed the Standard.	Genuine but below the Standard.	Deficient in Fat.	Adulterated with Water.	Average Percentage of Added Water.	Sour.
Brisbane	1,392	1,174	125	50	43	7.3	..
Bowon	18	13	..	3	1	7.3	1
Bundaberg	18	18	..	..	..	..	..
Cairns	19	15	..	1	3	9.0	..
Charleville	9	4	2	1	1	16.0	1
Charters Towers	33	28	1	2	2	20.0	..
Dalby	11	10	..	1	..	..	..
Gympie	13	10	1	2	..	..	..
Ingham	14	9	1	4	..	..	..
Ipswich	95	90	1	3	1	3.0	..
Mackay	47	35	2	6	4	6.4	..
Manly and Wynnum	64	52	6	2	4	3.0	..
Maryborough	16	16	..	..	..	..	..
Redcliffe	35	30	2	3	..	..	..
Roma	10	9	1	..	..	..	..
Rockhampton	92	82	2	1	5	5.0	2
Sandgate	62	57	4	..	1	21.8	..
South Coast	37	36	..	1	..	..	..
Toowoomba	123	109	1	11	2	8.0	..
Townsville	92	69	5	17	1	3.0	..
Warwick	17	9	..	8	..	..	..
Various Places (13)	42	33	2	5	2	10.0	..
	2,259	1,908	156	121	70	7.6	4

A summary of these results shows that 3.1 per cent. of the samples were adulterated with water, 5.4 per cent. were deficient in fat, 6.9 per cent. were genuine, but slightly below the standard, while 84.4 per cent. passed the standard.

The following table shows the milk position as compared with the four previous years :—

TABLE IV.

Year.	Number of Legal Samples.	Percentage Deficient in Fat.	Percentage Watered.	Average Percentage of Added Water.
1929-30	1,414	6.4	5.5	9
1930-31	1,638	8.7	2.5	8
1931-32	1,865	7.8	4.1	10
1932-33	2,146	5.0	4.9	7
1933-34	2,259	5.4	3.1	8

While the position still leaves plenty of room for improvement, particularly in some places outside of the metropolitan area, it is much improved from the average of the five years ending 30th June, 1912. The proportion of samples which then failed was 34 per cent., and the proportion of added water was 12 per cent.

Sixty-one samples of bread, representing the product from that number of bakeries in the metropolitan area, were submitted for examination. Only two samples, which contained 45.7 and 45.4 per cent. of water, respectively, exceeded the maximum water allowance of 45 per cent. laid down in the standard. The other samples ranged from 41.8 to 45 per cent., the average being 43.8 per cent. All the samples received were normal with regard to crust, colour, pile, texture, flavour, and moistness.

Twenty-six samples of imported tinned fish, mostly sardines and sild, were condemned because of decomposition or excessive tin content. All of the samples high in tin were markedly alkaline in reaction, some containing free ammonia. Even fresh stock shortly after arrival here has been found to be ammoniacal, suggesting that the fish was in a state of incipient decomposition when packed.

Only one sample of margarine, through an excess of water, failed to meet the standard. In aiming to make a product that resembles butter in appearance, consistency, colour, and flavour, the margarine manufacturer has been fairly successful. Practically all of the margarine on the Australian market is prepared from animal fat, hardened or hydrogenated vegetable oil, a small proportion of palm oil to produce a yellow colour, salt, and water. Unfortunately, it is deficient in oil soluble Vitamin A, the absence or deficiency of which in the diet induces eye troubles, cessation of growth, and low resistance to infection.

Because it is used largely by invalids the presence of preservative in minced meat is forbidden. Eleven Brisbane butchers, however, ignored this regulation by putting sulphur dioxide in their minced meat in proportions ranging from 1 to 20 grains per pound.

Eleven consignments of cabbage contained lead arsenate in quantity, the highest proportion found being 4.8 grains per pound. There has, fortunately, been a marked reduction recently in the use of lead arsenate on vegetables as compared with previous years.

Of 246 samples of apples and pears taken from consignments from Southern States 57 contained less than one-hundredth part of a grain of arsenic to the pound, and 189 contained over this proportion, the highest figure being a quarter of a grain per pound. These samples were taken because they showed the presence of spray residues on the skins, and so do not afford much evidence of the actual proportion of fruit coming forward that is adulterated with arsenic. The British authorities placed a limit of one-hundredth part of a grain of arsenic to the pound on imported fruit, and this limit has tentatively been adopted in Queensland. It is unfortunate for both public and growers that this dangerous practice of using poisonous insecticides cannot be stopped. It affects the public because it renders the foods poisonous, and affects the growers because the public buy less, being afraid of the poison.

Several samples of fruit were examined in connection with a practice which has recently been adopted. A few years ago it was discovered that the green colour which characterises most unripe fruit can be changed to the yellow colour which characterises most ripe fruit by leaving the green fruit for a short time, generally overnight, in an atmosphere containing certain gases. Some of these gases, even when present in very small proportion, rapidly convert the green colour to a yellow, thereby giving a false appearance of ripeness. Several gases have been used for the purpose, even the exhaust gases from motor engines, and several kinds of fruit are treated. It appears that the great bulk of the citrus fruits are now being treated in this way, while a proportion of the bananas and pineapples are also being treated.

The appearance of ripeness is, however, entirely fictitious except when the gas is used as part of a complete ripening process. It is often used by itself, and after such treatment the green sour unripe oranges are still sour unripe oranges, despite their golden yellow skin; the green hard unripe bananas are still hard unripe bananas, despite their attractive artificial yellow skin; and the green sour unripe pineapples are still sour unripe pineapples, despite the deceitful yellow colour of the skin.

There is no question that the practice is fraudulent, as it is done solely with intent to give unripe fruit the appearance of being ripe, and so to deceive the buyers. Unfortunately, the problem of determining when a fruit is really ripe by definite chemical tests has not yet been solved, and a considerable amount of research work will probably have to be done before tests can be found for distinguishing whether or not a seemingly ripe fruit has acquired its yellow colour naturally or artificially. In the meantime the fraud is there, and is undoubtedly a breach of section 92 (1) (g) of the Health Acts, the section which defines when a food is adulterated. The following is the relevant paragraph:—

Section 92 (1) (g).—If it is mixed, coloured, powdered, coated, stained, or treated in any manner whereby damage, deterioration, inferiority, or true character or quality is or may be concealed.

There is, however, already evidence that some consumers are noticing the unripe quality of certain fruits of ripe appearance, and are buying much less fruit owing to the difficulty of obtaining it in edible condition. This loss of market may help to stop the practice, but in the best interests of the consumers, and, therefore, also of the growers, the problem created by the new fraud would probably be best met by a new regulation definitely prohibiting such misleading artificial colouring.

The use of lead arsenate on tobacco plants, both in Australia and overseas, has led to the examination of all tobacco sold either in leaf or in the manufactured form. Of the 2,664 samples examined, the great majority were free from, or only showed traces of, lead arsenate. Experiments have shown that although most of the arsenic in contaminated tobacco is left in the ash, if there is more than a trace of lead arsenate in the tobacco, some passes over in the smoke. All consignments showing more than a trace are therefore condemned. As buyers do not buy leaf until it has been certified as conforming to the Health Department's requirements, all batches have to be tested; hence the recent large increase in the number of tobacco samples.

Under the Health Acts the use for veranda rails, gates, or fences of paints containing more than 5 per cent. of soluble lead is not permitted. The proportion of soluble lead is determined by treating the paint pigment with a 0.25 per cent. solution of hydrogen chloride (hydrochloric acid), this strength being equivalent to the hydrochloric acid content of normal gastric juice. Of 91 samples of paint examined from veranda rails or fences, 67 exceeded the limit of 5 per cent. of soluble lead.

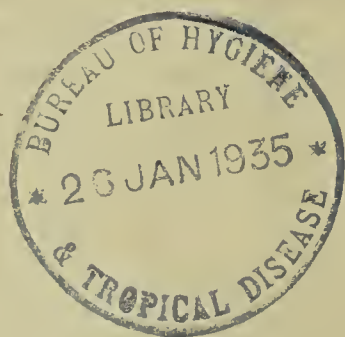
The examination of 30 samples of rubber toys revealed the presence of lead in the paint on 10 samples, and they were therefore condemned.

In the case of the spirituous liquors the samples submitted were those which had either failed or barely passed the preliminary tests made by inspectors. Adulteration with water was the only cause of failure in each sample which failed.

The miscellaneous samples included urine (for lead) (168), human hair (for lead and arsenic) (11), cat's liver (for lead) (6), cake and pudding powders (12), confectionery (10), soap (6), ice block moulds (12), tinned meat (11), hydrometers (9), ammonia, enamelled ware, beer, cream of tartar, dust, egg pulp, knitted goods, motor spirits, phosphorus paste, dental alloy, and vinegar.

Yours faithfully,

J. B. HENDERSON, Government Analyst.



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